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November 2012

FINAL

National Petroleum Reserve-Alaska

Integrated Activity Plan Environmental Impact Statement

Volume 5: Chapter 5 and 6

U.S. Department of the Interior
Bureau of Land Management

Alaska

BLM

The Bureau of Land Management Today

Our Vision

To enhance the quality of life for all citizens through the balanced stewardship of America's public lands and resources.

Our Mission

To sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

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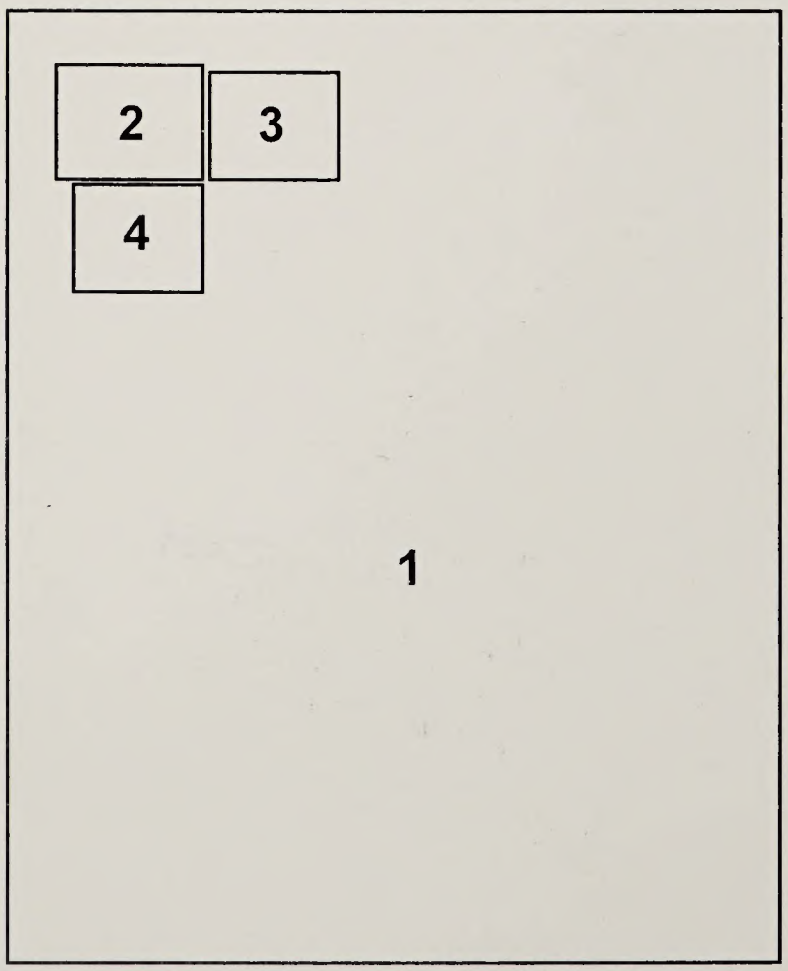

Cover Photos:

1. Along the Archimedes Ridge in the Utukok River Uplands of the National Petroleum Reserve-Alaska.
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2. Winter petroleum exploration, National Petroleum Reserve-Alaska. Photo by NSSI

3. Polar Bear, North Slope, Alaska.

4. Two newly born caribou calves in the Utukok River Uplands of the National Petroleum Reserve-Alaska.
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National Petroleum Reserve-Alaska

FINAL

Integrated Activity Plan/ Environmental Impact Statement

Volume 5
Chapters 5 and 6

Prepared by:

U.S. Department of the Interior
Bureau of Land Management
Anchorage, Alaska

In cooperation with:

North Slope Borough
U.S. Bureau of Ocean Energy Management
U.S. Fish and Wildlife Service

November 2012

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How the IAP/EIS is Organized

VOLUME 1

Chapter 1 – Introduction: Summarizes the purpose of and need for this IAP/EIS and decisions to be made.

Chapter 2 – Alternatives: Describes and compares proposed management alternatives.

Chapter 3 – Affected Environment: Presents existing natural and socioeconomic resources in the NPR-A and trends, including those associated with climate change.

VOLUME 2

Chapter 4 – Environmental Consequences (sections 4.1 – 4.4): Provides the assumptions upon which the impact analysis rests and evaluates impacts of Alternatives A and B-1 on resources and uses in the NPR-A relevant to making a decision among the alternatives.

VOLUME 3

Chapter 4 – Environmental Consequences continued (sections 4.5 – 4.7): Evaluates impacts of Alternatives B-2 (preferred alternative), C, and D on resources and uses in the NPR-A relevant to making a decision among the alternatives.

VOLUME 4

Chapter 4 – Environmental Consequences continued (sections 4.8 – 4.13): Evaluates the cumulative impacts on resources and uses in the NPR-A and other effects relevant to making a decision among the alternatives.

VOLUME 5

Chapter 5 – Consultation and Coordination: Describes public and government (including tribal) consultation undertaken for this plan and the development of alternatives and lists the plan's preparers.

Chapter 6 – Comments and Responses: Presents public comments on the Draft IAP/EIS and responses to the comments.

VOLUME 6

Appendix A: ANILCA Section 810 Analysis of Subsistence Impacts

Appendix B: Federal, State, and Local Permits and/or Approvals for Oil and Gas Exploration, Development, and Production Activities

Appendix C: NPR-A Climate Change Analysis: An Assessment of Climate Change Variables in the National Petroleum Reserve in Alaska

Appendix D: Essential Fish Habitat

Appendix E: Common, Scientific and Iñupiaq Names of Species Listed in the IAP/EIS

Appendix F: BLM Sensitive Species List for Alaska

Appendix G: Information, Models, and the Assumptions Used to Analyze the Effects of Oil Spills

Appendix H: Air Quality Related Values and Dispersion Modeling Results

Glossary and Bibliography

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Chapter 5:

Consultation and Coordination

CHAPTER 5: Consultation and Coordination

5.1 Introduction

This section summarizes the public and agency outreach the BLM has engaged in as it has developed the NPR-A IAP/EIS. This outreach included keeping the public and agencies informed of the process and offered opportunities for the public and agencies to express their concerns and suggest how the BLM should proceed. The section also identifies the individuals who prepared the IAP/EIS.

5.2 Scoping

5.2.1 Formal Scoping

Formal scoping began on July 28, 2010, with the publication in the Federal Register of a Notice of Intent to prepare an Integrated Activity Plan and Environmental Impact Statement. The Notice of Intent notified the public of the beginning of the scoping process, described that process, identified preliminary issues for analysis in the planning process, and provided information on means to submit scoping comments. The BLM launched a website for the plan on July 28, 2010 on which it furnished the public with background information on NPR-A, past planning efforts in NPR-A, and additional information on how to submit scoping comments. The agency also mailed a flyer on the planning effort to approximately 2,500 individuals on its NPR-A mailing list; the Bureau followed up with a postcard to approximately 990 individuals within commuting distance of communities in which scoping meetings were held to provide specific information on the time and place of meetings.

The BLM received scoping comments by mail (70), fax (5), e-mail (approximately 147,000), through its ePlanning website's comment form (2), and through public scoping meetings. (Some commenters provided identical written comments by several different means and some individuals sent multiple e-mails.) Through the assistance of the North Slope Borough, which is a cooperating agency in the planning effort, the BLM held six scoping meetings in the fall of 2010 in the North Slope communities of Barrow (September 9), Anaktuvuk Pass (September 14), Nuiqsut (September 16), Wainwright (September 20), Atqasuk (September 21), and Point Lay (September 27). The agency also held scoping meetings in Fairbanks (September 13) and Anchorage (September 23).

5.2.2 Tribal Consultation

To initiate the government-to-government consultation process as required by Presidential Executive Memorandum dated April 29, 1994, the BLM initiated the government-to-government tribal consultation process with letters sent on August 5, 2010, to the following 43 tribes whose members could be affected by NPR-A management actions:

- Allakaket Village
- Chinik Eskimo Community
- Galena Village (aka: Louden Village)
- Hughes Village
- Huslia Village
- Inupiat Community of the Arctic Slope
- King Island Native Community
- Koyukuk Native Village
- Native Village of Ambler
- Native Village of Barrow
- Native Village of Brevig Mission
- Native Village of Buckland
- Native Village of Council
- Native Village of Deering
- Native Village of Elim
- Native Village of Kiana
- Native Village of Kivilina
- Native Village of Kobuk
- Native Village of Kotzebue
- Native Village of Koyuk
- Native Village of Noatak
- Native Village of Nuiqsut
- Native Village of Point Hope
- Native Village of Point Lay
- Native Village of Selawik
- Native Village of Shaktoolik
- Native Village of Shishmaref
- Native Village of Shungnak
- Native Village of St. Michael
- Native Village of Teller
- Native Village of Unalakeet
- Native Village of Wales
- Native Village of White Mountain
- Nome Eskimo Community
- Noorvik Native Community
- Nulato Tribal Council
- Organized Village of Grayling
- Stebbins Community Association
- Village of Anaktuvuk Pass
- Village of Atqasuk
- Village of Kaltag
- Village of Solomon
- Village of Wainwright

The Native Village of Point Hope requested consultation and a BLM representative met with the tribal council in November 2010. Tribal consultation continued throughout the development of this Final IAP/EIS.

5.2.3 Coordination and Consultation with Local, State, and Federal Agencies

The BLM has reached out to governmental agencies in a number of ways. Most notable has been the participation in this planning effort of the North Slope Borough, the State of Alaska, the U.S. Bureau of Ocean Energy Management, and the U.S. Fish and Wildlife Service as cooperating agencies as defined in 43 CFR 1508.5. (The National Park Service and the U.S. Geological Survey declined invitations to be cooperating agencies. The State of Alaska withdrew as a cooperating agency on September 12, 2012.) These cooperating agencies have strengthened the planning process in several ways. They contributed ideas to the formulation of the alternatives. They reviewed the IAP/EIS as it was being developed and contributed corrections and suggestions for improvement of the analysis. The North

Slope Borough, the Bureau of Ocean Energy Management, and the U.S. Fish and Wildlife Service also authored some of the analysis; see section 5.3 for a list of preparers, including their affiliation. Note, however, that although this document has benefited from the input from the cooperating agencies' extensive knowledge of the people, resources, and uses of the NPR-A and nearby lands and waters, the BLM bears ultimate responsibility for this IAP/EIS, including the preferred alternative.

The BLM is consulting with the Alaska State Historic Preservation Office as part of section 106 consultation under the National Historic Preservation Act to determine how proposed industrial activities could impact cultural resources listed on or eligible for inclusion in the National Register of Historic Places. With a letter of January 19, 2011, the BLM initiated consultation with the State Historic Preservation Office for the IAP/EIS. Formal consultations with State Historic Preservation Office also may be required during implementation of individual projects. Consultations with the State Historic Preservation Office are ongoing and will be completed by the time of the signing of the record of decision.

The analysis required by the Alaska National Interests Lands Conservation Act's (ANILCA) Section 810 reached a finding of "may significantly restrict subsistence use" (see Appendix A). Consequently, the BLM notified the State of Alaska and the North Slope Federal Subsistence Regional Advisory Council of this finding and conducted ANILCA 810 subsistence hearings in the potentially affected communities identified within the analysis.

The BLM also worked with multiple agencies in accordance with the June 2011 "Memorandum of Understanding among the U.S. Department of Agriculture, U.S. Department of the Interior, and U.S. Environmental Protection Agency, Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the National Environmental Policy Act Process" to model potential air quality impacts of oil and gas activities in the NPR-A. See Appendix H.

5.2.4 Consultation with Non-Governmental Entities

The BLM has invited interested parties to discuss their concerns and knowledge about the NPR-A and has maintained an open door to listen to concerns throughout the planning process. BLM managers and staff have met with organizations supporting oil and gas development, such as the Alaska Oil and Gas Association and the Resource Development Council, and have sat down with oil and gas leaseholders and leaseholders in the Chukchi Sea to increase the agency's understanding of their concerns. Similarly, the BLM has met on multiple occasions with environmental groups, including the Alaska Wilderness League, Audubon Alaska, and The Wilderness Society, to share information and concerns about resources within the NPR-A. The BLM has also participated in the Western Arctic Caribou Herd Working Group and obtained the insight of its members on caribou that utilize the NPR-A.

5.2.5 Public Review and Comment on the Draft IAP/EIS

The Notice of Availability of the Draft NPR-A IAP/EIS and the Announcement of Public Subsistence-Related Hearings Schedule were published in the Federal Register on March 30, 2012. The public comment period was originally scheduled from March 30

through June 1, 2012. After receiving several requests for extensions of the comment period deadline, the deadline was extended through June 15, 2012.

Public notices announcing the comment period were placed in newspapers with circulation in or near locations where public meetings were held. These newspapers included the Arctic Sounder, May 3 and May 10, 2012; Fairbanks Daily News Miner, May 13 and May 23, 2012 and the Anchorage Daily News, May 13 and May 24, 2012. Public service announcements were broadcasted on radio station KBRW from May 1 through May 24. Flyers were posted in key community locations in Atqasuk, Nuiqsut, Barrow, Point Lay and Wainwright, all located on the North Slope of Alaska. The BLM issued a press release on March 29, 2012, notifying the public that the Draft IAP/EIS was available for public review. The agency issued another press release on April 24, 2012, providing the schedule for public comment and ANILCA 810 subsistence hearings. Information on the Draft IAP/EIS was also posted and available on BLM-Alaska's website (www.blm.gov/ak). The public was able to access the website to download a copy of the Draft IAP/EIS and provide their comments (including attachments).

Public meetings and ANILCA 810 hearings were held in Point Lay on May 14 and June 5, Wainwright on May 15, Nuiqsut on May 16, Atqasuk on May 17, Barrow on May 21, Anaktuvuk Pass on May 22, Fairbanks on May 23, and Anchorage on May 24. At these meetings, BLM provided an overview of the alternatives, answered questions, and took public comments and testimony regarding the ANILCA 810 analysis and findings. Over 400,000 comments were received on the Draft IAP/EIS. These included letters, electronic mail, facsimiles, comments and attachments posted to the project website, and comments provided at the public hearings. A summary of the comments received and specific comments and responses are presented in Chapter 6 of this Final IAP/EIS.

5.2.6 Development of the Preferred Alternative

After completion of the public hearings and closure of the public comment period, the core planning team, resource staff, and management in both BLM and DOI held multiple meetings separately and jointly to review the comments and to develop the BLM's preferred alternative for the Final IAP/EIS. Several alternative proposals were considered. These included proposals to close or open additional areas to leasing and development, place greater or lesser restrictions on the types of activities allowed under stipulations and best management practices, and combine elements of two or more alternatives.

While all comments were considered, special attention was given to communications providing insight on resources, the requirements of industry for viable onshore and offshore development, and the perspective of those experienced in life in and near NPR-A. Staff and managers considered the substantive arguments presented by commenters, the resource values of the NPR-A, the appropriate mix of surface resource protections, and the importance of offering opportunities for oil and gas leasing, exploration, and development, including both development within NPR-A and support for offshore development in both the Chukchi and Beaufort Seas. Extensive discussions on these matters were held both in Alaska and in Washington, D.C., culminating in Secretary of the Interior Ken Salazar's announcement of the preferred alternative on August 13, 2012.

5.3 List of Preparers

The following individuals participated in preparing the IAP/EIS. The list of individuals includes the individuals' agency and role in the IAP/EIS. The BLM employees are listed by their office, including AFO for Arctic Field Office, AKSO for Alaska State Office, OPM for Office of Pipeline Monitoring, NOC for the National Operations Center in Denver, and WO for BLM's Washington Office. North Slope Borough (NSB), Bureau of Ocean Energy Management (BOEM), and U.S. Fish and Wildlife Service (USFWS) authors are also included. In addition, numerous employees of the cooperating agencies reviewed portions of the IAP/EIS and provided constructive suggestions for improvement.

- Aumann, Ethan (BLM-NOC; Climate)
- Banet, Arthur; (BLM-AKSO; Petroleum Resources, Oil and Gas Scenario)
- Baraff, Lisa (NSB contractor; Marine Mammals)
- Bennett, Jewel (USFWS; Marine Mammals)
- Caplan, Susan (contractor to BLM Wyoming State Office; Air Quality and Climate)
- Cribley, Bud (BLM-AKSO; State Director)
- Diel, William (BLM-AKSO; Petroleum Resources, Oil and Gas Scenarios)
- Ducker, James (BLM-AKSO; IAP/EIS Planning Lead, Special Areas)
- Ellefson, Robert (BLM-AKSO; Geology and Minerals, Sand and Gravel)
- Ervine, Eugene (BLM-AKSO; Wild and Scenic Rivers, Wilderness Resources)
- Flora, Susan (BLM-AFO; Solid and Hazardous Wastes)
- Fritz, Stacey (BLM-AFO; Subsistence, Environmental Justice, Sociocultural Systems)
- Geisler, Eric (BLM-AKSO; Soil Resources, Vegetation, Wildland Fire)
- George, Craig (NSB; Marine Mammals)
- Goodwin, Randy (BLM-AKSO; Transportation; Travel Management)
- Hamfler, Cindy (BLM-AFO; Physiography, GIS)
- Herreman, Jason (NSB; Marine Mammals)
- Higdon, Matthew, (BLM-WO; NEPA review)
- Kelly, Lon (BLM-AFO; AFO Manager, Wild and Scenic Rivers)
- Kemnitz, Richard (BLM-AFO; Renewable Energy, Water Resources, Wetlands and Floodplains)
- King, Robert (BLM-AKSO Cultural Resources, Paleontological Resources)
- Koss, Lee (BLM-AKSO Air Quality, Climate, Physiography, Soil Resources, Water Resources, Wetlands and Floodplains)
- Krabacher, Paul (BLM-AKSO; Vegetation)
- Kunz, Mike (BLM-AFO; Cultural Resources, Paleontological Resources)
- Laubenstein, Karen J (BLM-AKSO; State Writer-Editor and Printing Specialist)
- Lee, Murray (NSB contractor; Public Health)
- Maxwell, David (BLM-NOC; Air Quality and Climate)
- McCrum, Micheal (BLM-AKSO; Solid and Hazardous Wastes)
- McIntosh, Stacie (BLM-AFO; Environmental Justice, Sociocultural Systems)
- Moore, John (BLM-AKSO [acting]; Fish)
- Murphy, Ted (BLM-AKSO; Former Deputy State Director for Resources; current Associate State Director)
- Nicholls, Craig (BLM-NOC; Air Quality modeling)
- Niglio, Lou (BLM-AKSO; Petroleum Resources, Oil and Gas Scenario)
- Nigro, Deborah (BLM-AFO; Birds)

- Orenstein, Marla (NSB contractor; Public Health)
- Overbaugh, Bill (BLM-AKSO; Recreation Resources, Visual Resources)
- Patterson, Brian (Golder Associates Inc.; Air Quality modeling)
- Pindell, Darla (BLM-AKSO; Economy)
- Psarianos, Bridget (BLM-AKSO; Planning and Environmental Specialist)
- Rathbun, Vanessa (BLM-AKSO, Visual Information Specialist)
- Sayre, Roger (BLM-AFO; Planning and Environmental Coordinator; Non-Oil and Gas Scenarios)
- Sformo, Todd (NSB; Marine Mammals)
- Sharp, Daniel (BLM-AKSO; Subsistence)
- Smith, Caryn (BOEM; Oil Spills and Gas Releases)
- Staab, Cara (BLM-AKSO; Birds, Terrestrial Mammals, Marine Mammals)
- Suydam, Robert (NSB; Marine Mammals)
- Sweet, Serena (BLM-AKSO; Supervisory Planner)
- Theisen, Skip (BLM-AFO; Wildland Fire)
- Van de Weg, Darrel (BLM-AFO; Geology and Minerals, Sand and Gravel)
- Varner, Matt (BLM-AKSO; Fish)
- Walker, Shane (BLM-AFO; Land Ownership and Uses, Transportation)
- Whitman, Matthew (BLM-AFO; Fish)
- Wixon, Donna (BLM-AFO; Land Ownership and Uses, Recreation Resources, Wilderness Resources, Visual Resources)
- Wrabetz, Mike (BLM-OPM; Spill Prevention and Response)
- Yokel, Dave (BLM-AFO; Terrestrial Mammals and Vegetation)
- Zelenka, Thomas (BLM-AKSO; Petroleum Resources, Oil and Gas Scenario)

Chapter 6: Comments and Responses

CHAPTER 6: Comments and Responses

6.1 Introduction

This chapter presents comments BLM received on the National Petroleum Reserve in Alaska Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS), a description of how all comments were considered, and responses to all substantive comments. The comment period was from March 30 through June 15, 2012, during which time comments were transmitted to BLM via mail, fax, website form, hand-delivery, and public meeting.

Approximately 402,240 communications were received. Of these, approximately 401,760 reflected the views of, and closely mirrored language suggested by, advocacy groups, including Alaska Wilderness League (approximately 12,600 electronically and 340 postcards), the Audubon Society (approximately 11,800 electronically and 5,400 postcards), Center for Biological Diversity (approximately 30,500), Consumer Energy Alliance (approximately 3,700), Defenders of Wildlife (approximately 58,050), Earthjustice (approximately 27,150), the National Wildlife Federation (approximately 21,400), the Natural Resources Defense Council (approximately 43,100), Ocean Conservancy (approximately 4,600), Pew Trust (approximately 62,900), Sierra Club (approximately 33,200), The Wilderness Society (approximately 15,850), and the Wildlife Conservation Society (25,260). Most communications were written statements delivered either on electronic medium or received through the website form developed for this project (201 messages). Much smaller numbers of comments were received by fax, by mail, or by hand-delivery. Some commenters used multiple means to provide the same communication, e.g., mailing and faxing a letter. In these cases, the comment is counted as one communication. In addition to the written comments, 98 people spoke at public meetings in Anaktuvuk Pass, Anchorage, Atqasuk, Barrow, Fairbanks, Nuiqsut, Point Lay, and Wainwright. Each speaker's statement is counted as one communication.

All communications were reviewed and entered into the comment analysis database and the Administrative Record. Consistent with Federal regulations and BLM's NEPA Handbook, BLM has drafted responses to substantive comments. Substantive comments were directed to members of the IAP/EIS's team for consideration in the drafting of this Final IAP/EIS. Responses were drafted to all such comments and reviewed by the IAP/EIS team. Where appropriate, the team made changes in the analysis in the Final IAP/EIS.

Communication: a letter or postcard, fax, webform submission, or statement by a single individual at a public meeting submitted to the BLM during the comment period for consideration in development of the Final IAP/EIS. A communication can contain one or more comments.

Comment: a distinct statement regarding an aspect of the Draft IAP/EIS.

Substantive Comment: a comment that (a) questions, with reasonable basis, the accuracy of information in the Draft IAP/EIS, or (b) questions, with reasonable basis, the adequacy of, methodology for, or assumptions used for the environmental analysis, or (c) presents new information relevant to the analysis, or (d) presents reasonable alternatives other than those analyzed in the Draft IAP/EIS, or (e) causes changes or revisions in one or more of the alternatives.

6.2 Communications for Which No Response is Provided

The vast majority of communications received have not received specific responses because they were not substantive. (See the definition of a substantive comment in the text box.) Many of these communications were expressions of personal preference. They expressed the writers' views on what management actions BLM should take. While these communications may have indicated why the writers advocated a certain course of action, they did not propose a new reasonable alternative or mitigation measure or present new information. Rather the management action advocated was reflected in the existing alternatives or was within the range of the alternatives in the Draft IAP/EIS and the information provided was a part of the analysis considered by BLM in the Draft IAP/EIS. The great majority of such comments advocated protection of NPR-A's surface resources and opposed oil and gas development at least in areas considered of special importance for wildlife resources, such Teshekpuk Lake and nearby lands, lands and waters near the coast, and lands in the southwestern part of the Reserve. Many of these comments endorsed Alternative B in the Draft IAP/EIS (Alternative B-1 in the Final IAP/EIS), which emphasizes the protection of natural resources. Communications generated by commenting campaigns conducted by Alaska Wilderness League, the Audubon Society, Center for Biological Diversity, Defenders of Wildlife, Earthjustice, the National Wildlife Federation, the Natural Resources Defense Council, Ocean Conservancy, Pew Trust, Sierra Club, The Wilderness Society, and the Wildlife Conservation Society generally reflected these views. The Consumer Energy Alliance developed a campaign in support of Alternative D.

Some comments stated that the Draft IAP/EIS or the process by which it was developed was inadequate or inaccurate, but did not provide substantive reasonable support for the assertions. Without adequate information about the perceived inadequacies of the Draft IAP/EIS, BLM is not able or required to specifically address the concern. Similarly, some comments advocated that additional measures be taken to protect surface resources. When specific recommendations were made, the Final IAP/EIS provides responses in Section 6.3. However, without recommendations that provide some specificity regarding the additional protection or the relaxed approach for a stipulation or required operating procedure/best management practice advocated, BLM is not able to introduce a responsive new or modified protective measure (40 CFR 1503.3(a)). For example, comments that only state that BLM should provide maximum protection for wildlife, subsistence, or some other resource or use of the land provide too little information about what sort of additional protection is requested.

Finally, prior to June 1, the BLM received multiple requests to extend the comment period. The comment period was initially established to occur between March 30 and June 1, 2012. The BLM extended the comment period to June 15. This chapter does not include comments requesting extension of the comment period beyond June 1.

6.2.1 Government Officials and Governments

The BLM received comments from the State of Alaska, the North Slope Borough, and U.S. Senator Lisa Murkowski. Their communications included extensive and numerous substantive comments. See section 6.3 for their comments and BLM's responses.

Nine Alaska State legislators wrote to comment on the plan. Below are the letters of Representatives Kyle Johansen and Les Gara. The letters of the other seven legislators are similar to Representative Johansen's. Their letters include substantive comments similar to those raised in the State of Alaska's comments. Please see BLM's responses to the State's letter for responses to these legislators' concerns.

The BLM also received resolutions from the City of Anaktuvuk Pass and the Native Village of Naqsragmiut.

RECEIVED
JUN 11 2012
BY: Selena

Date: 6/8/2012

To: NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

From: Representative Kyle Johansen KJ
Alaska State Legislature
House district 1

Re: National Petroleum Reserve - Alaska (NPR-A)

In 1923, President Harding created what is now the National Petroleum Reserve in response to the increase in demand for fossil fuels from the US Navy. Management of this land has since been changed to the Bureau of Land Management (BLM) but this land has always been intended as a petroleum reserve.

The BLM should adopt Alternative D as its Preferred Alternative, opening all of NPR-A's subsurface to oil and gas leasing, with mitigation measures to protect surface resources, but which do not block development of onshore energy deposits or infrastructure necessary to transport oil and gas from the Chukchi Sea to TAPS.

New oil and gas production from NPR-A and connecting Chukchi production to TAPS via the petroleum reserve would revitalize North Slope production, which has fallen under 600,000 barrels per day, compared to a peak of over 2 million barrels per day.

With an estimated 27 billion barrels of oil and 132 trillion cubic feet of natural gas in place, Alaska Outer Continental Shelf itself could produce an average of 700,000 barrels per day for 40 years. This could cut the nation's trade deficit by $25 billion annually, generate over $193 billion in government revenue, create an annual average of 55,000 new jobs, and $145 billion in new payroll.

The IAP/EIS must include clear and specific provisions for onshore infrastructure to transport future offshore oil and gas resources across NPR-A. Surface protection measures, Special Area designations, and other restrictions must not prevent the transport of Chukchi oil and gas resources to market.

The alternatives offered in the IAP/EIS appear to refocus land management in NPR-A from multiple use to conservation, which is inconsistent with the primary purpose of the petroleum reserve. This is unacceptable for an area intended for oil and gas development.

Enlargement of Special Areas, as described in Alternative B, could significantly impact onshore development and infrastructure necessary to transport offshore oil and gas resources to market in an economic and efficient manner.

Given the technological advances of the mining industry in the Arctic and sub-Arctic and the growing need for strategic minerals, all of NPR-A should be open to mineral entry, as well as industrial mineral and coal leasing. The Department of the Interior should make this recommendation to Congress.

Energy and mineral development in NPR-A would benefit the economy by creating increased revenues and employment, while enhancing national security.

BLM should refrain from designating highly-restrictive conservation units in NPR-A, given the nation's growing need for energy and minerals. Alaska already has an overwhelming majority of the nation's public lands closed to development.

Alaska State Legislature
House of Representatives

Session address:
Alaska State Capitol
Juneau, Alaska 99801-1182
1-888-465-2647 (toll free)
1-907-465-3518 (fax)

Interim address:
716 West 4th Avenue
Anchorage, Alaska 99501-2133
1-907-269-0106
1-907-269-0109 (fax)

Representative Les Gara

RECEIVED
JUN 08 2012
BY: Selena

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99501

RE: Comments regarding National Petroleum Reserve-Alaska IAP/EIS

To Whom It May Concern:

I am writing to comment on needed, responsible oil development in the National Petroleum Reserve-Alaska and neighboring areas. That involves both opening the Reserve for oil development - something Alaska needs - and not threatening the most sensitive areas of the Reserve relied upon by subsistence users. Both can be done responsibly.

As you may recall, I and other Democratic legislators wrote last year to encourage the reversal of an Army Corps of Engineers ruling blocking a needed bridge across the Colville River to Conoco's CD-5 unit in NPR-A. We appreciate the reversal so that area can now be developed. Declining oil production is a threat to Alaska's economy, and our ability to fund schools, roads, and needed services. Unlike most other states, we have a limited population that would make funding basic government services difficult without oil development, and NPR-A was set aside for that purpose.

You will hear comments from people in the area much more knowledgeable than I am about how they use NPR-A for subsistence purposes. I am aware that certain areas around Teshekpuk Lake are used as calving areas for the Teshekpuk Lake Caribou Herd, which in turn is important to people from surrounding villages. I hope that as we continue to open NPR-A to oil and gas development - something Alaska needs - we do so in a manner that protects the area's subsistence wildlife. That can be done in a number of ways that allows for oil development in NPR-A and neighboring areas, including minimizing pad footprints and the use of horizontal drilling technologies. Fewer pads are needed today than twenty years ago due to horizontal drilling, and I hope that you will encourage companies to use the technology that is available to both proceed with development in NPR-A and protect the area's wildlife and subsistence users.

Thank you very much for taking my comments into consideration. Alaska is a place where needed oil development and the protection of subsistence uses are both important, and can normally co-exist. I believe you can devise a plan that allows both in NPR-A.

Sincerely,

Representative Les Gara

The BLM also received comments from 63 members of the U.S. Congress. Their letter (without all signatures) is copied below.

Congress of the United States
Washington, DC 20515

June 14, 2012

Honorable Ken Salazar
Secretary of the Interior
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240

Dear Mr. Secretary:

We submit this letter for your consideration as the Bureau of Land Management (BLM) prepares the first-ever comprehensive Integrated Activity Plan (IAP) for National Petroleum Reserve-Alaska (NPRA). There is a clear Congressional foundation to balance both energy development and important conservation areas and we respectfully urge you to give Alternative B of the IAP all due consideration. We believe this alternative fulfills Congressional intent by providing reliable protection for sensitive wildlife areas while still allowing for energy development.

The Naval Petroleum Reserves Production Act of 1976 (NPRPA) directs the Secretary of the Interior to determine what areas in the NPRA to lease for oil and gas exploration while requiring "maximum protection" of areas recognized by the Secretary as having "significant subsistence, recreational, fish and wildlife, or historical or scenic value."[1] As recognized in the first IAP initiated for the northeastern part of the NPRA in 1998, the fundamental purpose of an activity plan "is to determine the appropriate multiple use management" of the Reserve; NPRPA "encourages oil and gas development in NPRA while requiring protection of important surface values."[2] These goals are not incompatible. With nearly 23 million acres, a management plan would balance both the need to protect these special areas while still leaving millions of acres available for leasing.

Under NPRPA, Congress specifically identified the Teshekpuk Lake and Utukok River areas as deserving of maximum protection. Two other special areas, Kasegaluk Lagoon and the Colville River, have since been recognized. Collectively, these areas include the concentrated calving grounds of two of Alaska's largest caribou herds (i.e., the Western Arctic Caribou Herd and the Teshekpuk Lake Caribou Herd); globally important nesting, molting and staging habitat for migratory waterfowl, seabirds and shorebirds; essential habitat for various marine mammal species including polar bear, walrus, spotted seal, and beluga whale; internationally-recognized raptor nesting concentrations; and exceptional predator populations including grizzly bears, wolves and wolverine. In addition to a spectacular diversity and abundance of wildlife, these areas provide vital subsistence harvest resources that support more than 40 small villages and communities throughout northern and western Alaska.

[1] 42 USC § 6504
[2] 1998 NE NPRA Final IAP/EIS, Vol 1: Introduction - Purpose and Scope, p. 1-3

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Congress has also required that there be an oil and gas leasing program in the NPRA. To that end, there has been extensive seismic exploration and the Department of the Interior has been offering lease sales in the NPRA for decades. There have been 11 sales since 1982, with the most recent in December, 2011. More than six million acres have been leased and dozens of exploration wells have been drilled. Based on surveys from these exploration wells, the United States Geological Survey recently reassessed the hydrocarbon potential of the NPRA and significantly decreased its estimate of undiscovered recoverable resources in the NPRA. The NPRA has a valuable role to play in meeting the nation's future energy needs, as demonstrated by the Administration's recent approval of industry plans to develop additional production facilities in the NPRA adjacent to the existing Alpine oil field.

At the same time, consistent with the NPRPA, the Administration has appropriately balanced NPRA leasing and development authorizations with protection of key sensitive areas in the NPRA such as Teshekpuk Lake. Both Congress and successive administrations have long-recognized the importance of providing maximum protection for this area to safeguard its unique combination of biological values. Protection of the Teshekpuk Lake area has enjoyed broad bipartisan support from successive administrations across time. Secretary James Watt, on behalf of President Reagan, took action to keep vital waterfowl breeding and molting habitat at Teshekpuk Lake free of leasing and development, as have subsequent administrations. The final management plan must continue this tradition.

As the BLM now prepares the first-ever comprehensive management plan for the entire NPRA we hope that Teshekpuk Lake and other special areas will continue to be strongly protected. There is room for balance in the NPRA that includes both production and protection. We support future resource development in the NPRA, consistent with the NPRPA, which includes the conservation of areas with exceptional ecological values. We ask that you give special attention to Alternative B, and look forward to a final plan that will keep Teshekpuk Lake and other key special areas free of leasing while developing energy resources in other parts of the NPRA.

Sincerely,

John D. Dingell
Member of Congress

Betty McCollum
Member of Congress

Jim Moran
Member of Congress

Eleanor Holmes Norton
Member of Congress

Anaktuvuk Pass Village Council
P.O. Box 21030
Anaktuvuk Pass, Alaska 99721-1030
Telephone: (907) 661-3612 • (907) 661-3619
Fax: (907) 661-3613
E-mail: cityofakp@gci.net • cityofakp2@gci.net

RESOLUTION OF THE CITY OF ANAKTUVUK PASS
NO. 2012-03

IN SUPPORT OF THE RECOMMENDATION
MADE BY THE WESTERN ARCTIC CARIBOU WORKING GROUP TO PROTECT
IMPORTANT HABITATS FOR CARIBOU WITHIN THE NATIONAL PETROLEUM RESERVE

WHEREAS, the caribou, marine mammals, migratory birds, fish and other resources for our sustenance migrate through our waters and land and continued development and exploitation of our waters and land poses eminent and long-term cumulative threat to our well-being; and

WHEREAS, individuals and communities throughout western and northern Alaska depend upon the health of the Western Arctic Caribou Herd (348,000 animals) and the Teshekpuk Lake Caribou Herd (64,000 animals) to provide a vital and sustainable subsistence harvest resource; and

WHERAS, the Western Arctic Caribou Herd Working Group was established in 1997 "*to ensure the long-term conservation of the Western Arctic Caribou Herd and the ecosystem on which it depends, to maintain traditional and other uses for the benefit of all people now and in the future.*"; and

WHEREAS, the Western Arctic Caribou Herd Working Group includes representatives from communities across northern and western Alaska that depend upon the Western Arctic Caribou Herd and Teshekpuk Lake Caribou Herd as a critical subsistence resource; and

WHEREAS, the Western Arctic Caribou Working Group has studied the needs of these caribou herds and repeatedly expressed the position that the calving grounds, insect relief, migratory areas of the WAH and the TCH should be excluded from oil and gas development within the National Petroleum Reserve-Alasl (NPR-A); and

WHEREAS, the Western Arctic Caribou Working Group has provided written public comments to the federal Bureau of Land Management (BLM) dated September 30, 2010 regarding land management in the NPR-A stating "the primary objective should be preventing disturbance to caribou as they engage in their annual seasonal movements and range use" and that "no leasing or activities associated with the development of oil and gas or coal bed methane should occur within the primary calving ground, critical insect relief habitat, or migratory corridors" of the Western Arctic and Teshekpuk Lake caribou herds).

WHEREAS, climate change and its effects on caribou, caribou habitats and ecosystem relationships need to be considered in a cumulative impacts framework; and

WHEREAS, mining is presently prohibited within the NPR-A by federal law and BLM should make no recommendations to change the law in order to allow mineral entry within NPR-A in the future; and

NOW THEREFORE BE IT RESOLVED, that Anaktuvuk Pass City Council strongly supports the position of the Western Arctic Caribou Herd Working Group and asks that BLM not allow resource extraction activities, including oil and gas development, within the primary calving grounds, migratory routes and insect relief areas of the Western Arctic and Teshekpuk Lake caribou herds within the NPR-A;

AND BE IT FURTHER RESOLVED that the BLM works with Tribes and other Alaska Native interests to incorporate and use Traditional Ecological Knowledge concerning resources such as the Western Arctic and Teshekpuk Lake caribou herds in order to improve management of these vital subsistence resources in the NPR-A.

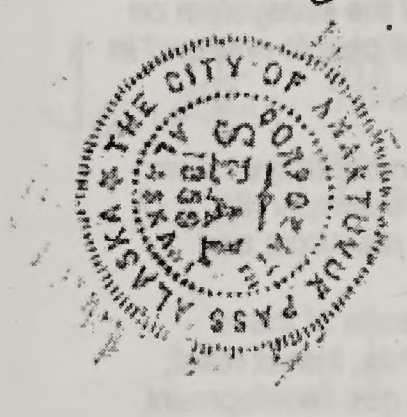
NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ANAKTUVUK PASS, ALASKA:

ADOPTED by duly constituted quorum of the City Council of Anaktuvuk Pass, Alaska, this 11th day of May, 2012.

Thomas Rulland, Mayor

ATTEST:

Cathy J. Wagner, City Clerk



RESOLUTION 12-07

IN SUPPORT OF THE RECOMMENDATION
MADE BY THE WESTERN ARCTIC CARIBOU WORKING GROUP TO PROTECT
IMPORTANT HABITATS FOR CARIBOU WITHIN THE NATIONAL PETROLEUM RESERVE

WHEREAS, the Native Village of [illegible] is a federally recognized tribal government organized under the Indian Reorganization Act of 1934 as amended for Alaskan Natives in 1936; and

WHEREAS, the caribou, marine mammals, migratory birds, fish and other resources for our sustenance migrate through waters and land we have used since time immemorial and new and continued development and exploitation of our waters and land poses eminent and long-term cumulative threat to our well-being; and

WHEREAS, individuals and communities throughout western and northern Alaska depend upon the health of the Western Arctic Caribou Herd (348,000 animals) and the Teshekpuk Lake Caribou Herd (64,000 animals) to provide a vital and sustainable subsistence harvest resource; and

WHEREAS, the Western Arctic Caribou Herd (WAH) has its primary calving grounds in the Utukok Uplands and migrate to insect relief habitats along the DeLong Mountains, Arctic Foothills, Upper Colville River and our traditional hunting areas and those of dozens of other villages; and

WHEREAS, the Teshekpuk Lake Caribou Herd (TCH) calving ground is largely within the Teshekpuk Lake Special Area and the insect relief area is east of the Teshekpuk Lake Special Area and to its west to the Dease Inlet area; and

WHERAS, the Western Arctic Caribou Herd Working Group was established in 1997 "*to ensure the long-term conservation of the Western Arctic Caribou Herd and the ecosystem on which it depends, to maintain traditional and other uses for the benefit of all people now and in the future.*"; and

WHEREAS, the Western Arctic Caribou Herd Working Group includes representatives from communities across northern and western Alaska that depend upon the Western Arctic Caribou Herd and Teshekpuk Lake Caribou Herd as a critical subsistence resource; and

WHEREAS, the Western Arctic Caribou Working Group has studied the needs of these caribou herds and repeatedly expressed the position that the calving grounds, insect relief, migratory areas of the WAH and the TCH should be excluded from oil and gas development within the National Petroleum Reserve-Alaska (NPR-A); and

WHEREAS, the Western Arctic Caribou Working Group has provided written public comments to the federal Bureau of Land Management (BLM) dated September 30, 2010 regarding land management in the NPR-A stating "the primary objective should be preventing disturbance to caribou as they engage in their annual seasonal movements and range use" and that "no leasing or activities associated with the development of oil and gas or coal bed methane should occur within the primary calving ground, critical insect relief habitat, or migratory corridors" of the Western Arctic and Teshekpuk Lake caribou herds).

WHEREAS, climate change and its effects on caribou, caribou habitats and ecosystem relationships need to be considered in a cumulative impacts framework; and

WHEREAS, mining is presently prohibited within the NPR-A by federal law and BLM should make no recommendations to change the law in order to allow mineral entry of any kind within NPR-A in the future; and

NOW THEREFORE BE IT RESOLVED, that the Native Village of Wainwright strongly supports the position of the Western Arctic Caribou Herd Working Group and asks that BLM not allow resource extraction activities, including oil and gas leasing or activities associated with the exploration and development of oil and gas, within the primary calving grounds, migratory routes and insect relief areas of the Western Arctic and Teshekpuk Lake caribou herds within the NPR-A;

AND BE IT FURTHER RESOLVED that the BLM works with Tribes and other Alaska Native interests to incorporate and use Traditional Ecological Knowledge concerning resources such as the Western Arctic and Teshekpuk Lake caribou herds in order to improve management of these vital subsistence resources in the NPR-A.

Timothy Ahgook Sr.
NTC- (President) 9-12-12

6.2.2 Nongovernmental Organizations

A number of organizations conducted campaigns encouraging members and others to comment on the NPR-A Draft IAP/EIS and provided suggested text or talking points. Individual commenters were commonly encouraged to personalize their comments. In instances where the additional text provided by individual respondents included substantive comments, their communications have been addressed in section 6.3.

Below is a reproduction of the standard text suggested by some organizations on the Draft IAP/EIS and postcards generated by campaigns of these organizations. To the extent that some of these communications include comments that may be substantive, responses to these comments can be found in section 6.3 in responses to longer and more developed arguments in communications provided by these organizations.

Alaska Wilderness League
(Approximately 12,600 electronic communications)

> Dear Secretary Salazar: The National Petroleum Reserve-Alaska is our nation's wildest place and deserves protection. I urge you to adopt Alternative B in order to provide the most responsible and balanced management plan for the Reserve – to allow for future oil and gas development in some areas while also safeguarding the special places that are key habitat areas that are vital to healthy wildlife populations in America's Arctic.

In addition, the BLM received approximately 340 of one of the following two postcards.

Dear President Obama,

America's Arctic is one of the world's most dynamic, intact ecosystems.
It is home to polar bears, walrus, caribou, beluga and bowhead whales,
and numerous species of birds that migrate across the United States.
Please protect this spectacular place from any new industrial development
until we can ensure that the wildlife and people that depend on it will be protected.

We owe it to future generations.

First Class Postage Required

President Obama
c/o Alaska Wilderness League
122 C Street NW, Ste 240
Washington, DC 20001

ALASKA WILDERNESS LEAGUE

Dear Director Bob Abbey,

First Class Postage Required

As you know, the National Petroleum Reserve – Alaska contains some of the world's highest-quality wilderness lands and waters, including Teshekpuk Lake, Utukok Uplands, Colville River, Kasegaluk Lagoon, Dease Inlet-Meade River, Peard Bay, DeLong Mountains and Arctic Foothills, and the Ikpikpuk River. As part of the planning effort underway for the Reserve you have promised to assess and identify lands with wilderness character. Thank you for your promise to ensure that these special areas within the Reserve are assessed and appropriately granted the strongest possible protections and safeguarding some of our nation's most treasured natural resources.

We owe it to future generations.

BLM Director Bob Abbey

Alaska Wilderness League
122 C Street NW, Ste 240
Washington, DC 20001

ALASKA WILDERNESS LEAGUE

Audubon Society

(Approximately 11,800 electronic communications and 5,400 postcards; their messages are represented in the following three postcards)

MAIL THIS CARD TODAY TO HELP SAVE AMERICA'S GREATEST ARCTIC WETLAND

Dear Secretary Salazar:

Teshekpuk Lake, located in the National Petroleum Reserve — Alaska, is an ecological jewel that lies at the heart of one of the most important wetlands in the circumpolar Arctic.

This unique wetland wilderness is a globally significant Important Bird Area providing prime habitat for countless waterfowl and shorebirds, as well as the rare Yellow-billed Loon. The area also supports the 67,000 animal-strong Teshekpuk Lake caribou herd, a critical resource for Alaska Native communities.

Oil development around Teshekpuk Lake will not solve America's energy problems, but it will cause irreparable harm to an ecological treasure. I urge you to **NOT ALLOW OIL DRILLING** in the vital wildlife habitat around Teshekpuk Lake.

Name

City/State/Zip

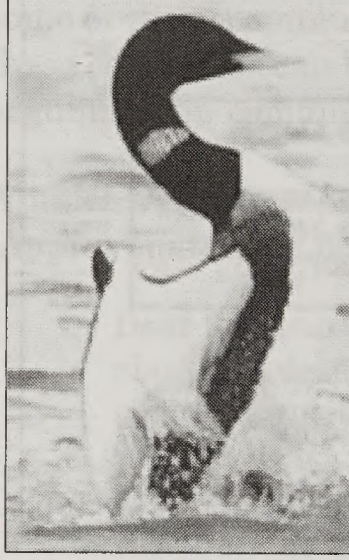
Email

(to receive periodic updates from Audubon)

SECRETARY KEN SALAZAR
C/O NATIONAL AUDUBON SOCIETY
1150 CONNECTICUT AVE NW STE 600
WASHINGTON DC 20036-4132

Dear Secretary Salazar:

Please adopt **Alternative B** in the final plan for the National Petroleum Reserve-Alaska (Reserve). Congress has long recognized that there are special areas in the Reserve that deserve protection from oil and gas development. Alternative B is the only alternative that will effectively and reliably protect caribou, millions of migratory birds, polar bears, walrus, wolves, wolverine, grizzly bears, ice seals, and other wildlife in the Teshekpuk Lake/Dease Inlet, Peard Bay, Utukok River Uplands/DeLong Mountains, the Colville River, and Kasegaluk Lagoon areas.



Making these areas unavailable for oil and gas leasing and establishing other protections as proposed in Alternative B would provide for balanced management of the Reserve while also allowing for responsible future oil and gas development in other areas.

(Please print)

Name: _____

City/State/ZIP: _____

Email: _____

(to receive periodic updates from Audubon)

The Teshekpuk Lake area provides essential habitat for the Teshekpuk Lake caribou herd and hundreds of thousands of waterfowl and shorebirds.

Dear Secretary Salazar:

Teshekpuk Lake, located in the National Petroleum Reserve – Alaska, is an ecological jewel that lies at the heart of one of the most important wetlands in the circumpolar Arctic.

This unique wetland wilderness is a globally significant Important Bird Area providing essential habitat for countless seabirds, waterfowl and shorebirds including the threatened Spectacled Eider and the rare Yellow-billed Loon. The area also supports the 67,000 animal-strong Teshekpuk Lake caribou herd, a critical subsistence food resource for Alaska Native communities.

The United States Geological Survey reports that oil development around Teshekpuk Lake would yield only about two week's worth of oil. This would not solve America's energy problems but it would cause irreparable harm to this extraordinary area.

I urge you to NOT ALLOW OIL DRILLING in the vital wildlife habitat around Teshekpuk Lake.

Name_____

Address _____

City, State, Zip _____

Email_____

First Class Postage here

Secretary Ken Salazar
C/O National Audubon Society
1150 Connecticut Avenue NW
Washington, DC 20036

Audubon

Center for Biological Diversity

(Approximately 30,500 electronic communications represented by the following two messages)

Message 1

The National Petroleum Reserve-Alaska, or Western Arctic Reserve, comprises the largest unprotected tract of public land in the United States. It provides habitat for a wide variety of Arctic species, and its wilderness values are second to none. While the most environmentally protective alternative analyzed by the Bureau of Land Management (Alternative B) is an improvement over previous plans, it still allows over 11 million acres of ecologically intact wilderness-quality lands to be leased for oil development. As the bureau develops the "integrated activity plan" and "final environmental impact statement" for the reserve, I urge you to provide maximum protection for areas with high-value habitats by designating all of the Special Area contained in Alternative B, and to create additional protections for all other areas in the reserve that contain ecologically intact and/or wilderness-quality lands.

The bureau must also consider the long-term impacts of greenhouse gas emissions from oil and gas development, and any future impacts of climate change on the low-lying western Arctic. Arctic animals are already stressed by a melting and warming Arctic, and none of the alternatives considered go far enough to protect these species from the wide array of impacts from oil and gas development.

Among other things, the bureau must account for sea-level rise due to ice melt, permafrost collapse, coastal erosion and increased high-energy storm events that will degrade, or wipe out, critical coastal habitat, including the Teshekpuk Lake area. The bureau must also consider the impacts of ocean acidification, changes in circulation, increased freshening due to sea ice melt, and shifts in productivity to the marine environment and to marine species, including polar bears, ice seals, walruses, bowhead whales, and beluga whales.

Congress has required that "maximum protection" be given to Special Areas in the reserve. I encourage the bureau to adopt an alternative that provides protections for these areas, which include Teshekpuk Lake, the Colville River, Kasegaluk Lagoon, and the Utukok River Uplands. The bureau must also protect the Dease Inlet-Meade River area, Peard Bay and adjacent wetlands, and the Ikpikpuk River and adjacent wetlands.

I implore the bureau to adopt a management alternative that includes the strongest possible protections for the Western Arctic Reserve. This means designating Alternative B as the preferred alternative, and adding additional protective measures for important wildlife habitat and wilderness areas so they are not destroyed by ecologically devastating oil and gas development, or from the long-term impacts of greenhouse gas emissions and climate change.

Message 2

The National Petroleum Reserve-Alaska, or Western Arctic Reserve, comprises the largest unprotected tract of public land in the United States, and its wilderness provides habitat for a wide variety of Arctic species. While the most environmentally protective alternative analyzed by the Bureau of Land Management (Alternative B) is an improvement over previous plans, it still allows over 11 million acres of ecologically intact wilderness-quality lands to be leased for oil development. As the BLM develops the "integrated activity plan" and "final environmental impact statement" for the reserve, please provide maximum protection for areas with high-value habitats by designating all of the Special Area contained in Alternative B, and to create additional

protections for all other areas in the reserve that contain ecologically intact and/or wilderness-quality lands.

In addition, the BLM must consider the long-term impacts of greenhouse gas emissions from oil and gas development, and any future impacts of climate change on the low-lying western Arctic. Arctic animals are already stressed by a melting and warming Arctic, and none of the alternatives considered adequately protect these species from the wide array of impacts from oil and gas development. These impacts include sea-level rise due to ice melt, permafrost collapse, coastal erosion and high-energy storm events that will degrade, or wipe out, critical coastal habitat, including the Teshekpuk Lake area. The BLM must also consider the impacts of ocean acidification, changes in circulation, increased freshening due to sea ice melt, and shifts in productivity to the marine environment and to marine species, including polar bears, ice seals, walruses, bowhead whales, and beluga whales.

Since Congress has required that "maximum protection" be given to Special Areas in the reserve, the BLM should adopt an alternative that provides protections for these areas, which include Teshekpuk Lake, the Colville River, Kasegaluk Lagoon, and the Utukok River Uplands. The BLM must also protect the Dease Inlet-Meade River area, Peard Bay and adjacent wetlands, and the Ikpikpuk River and adjacent wetlands.

I urge the BLM to adopt a management alternative that includes the strongest possible protections for the Western Arctic Reserve by designating Alternative B as the preferred alternative, and adding additional protective measures for important wildlife habitat and wilderness areas so they are not destroyed by oil and gas development, or from the long-term impacts of greenhouse gas emissions and climate change.

Consumer Energy Alliance

(Approximately 3,700 electronic communications)

I strongly urge the U.S. Bureau of Land Management (BLM) to move forward with a proposed Integrated Activity Plan that allows for expanded oil and gas development in the NPR-A as well as infrastructure development necessary to support oil and gas development offshore in the Chukchi Sea. Therefore, I believe Alternative D is the only acceptable management option for the petroleum reserve.

The NPR-A is a petroleum reserve. As part of its original intent, BLM should thus manage the area in a manner that facilities oil and gas production and the development of supportive infrastructure. Expanding special areas and wild and scenic rivers devalues the purpose and intent of the reserve as set out in the Naval Petroleum Reserves Production Act of 1976. Alaska and the federal government have designed significant portions of the state for conservation purposes. Misguided attempts to refocus land use of the NPR-A not only run counter to the law, but could further cause significant economic harm to Alaskans who depend on revenue from resource development to fund critical public services.

While I support Alternative D's approach, I understand that Alternative B and C would also nominally permit for the development of oil & gas onshore as well as the necessary infrastructure to support offshore production. However, the significant enlargement of special areas, as recommended in Alternative B, could affect the ability of onshore and offshore operators to lease areas for development as well as construct and operate the infrastructure necessary to transport their supplies to the Trans-Alaska Pipeline System (TAPS) in an efficient way.

Furthermore, if the purpose of this plan is to "provide an opportunity, subject to appropriate conditions, to construct necessary onshore infrastructure to transport oil and gas from the Chukchi Sea," then the BLM must consider all likely components in the construction and operation of this pipeline. The final plan must clearly allow for the construction of infrastructure, understanding that industry and regulators can cooperate on mitigation measures.

As the draft states, the Chukchi Sea is one of the most promising energy basins in the United States. Energy development in the Beaufort and Chukchi Seas has tremendous potential to bolster U.S. energy security and grow the economy. With a conservative estimate of 21 billion barrels of oil and 132 trillion cubic feet of gas, Alaska offshore resources must play a role in a balanced energy policy that prioritizes domestic resources. The TAPS – one of the most critical energy infrastructures in the United States – is averaging only 580,000 barrels of oil throughput a day, down from a high of nearly 2 million barrels a day in 1988. Without a significant source of new oil coming online, low throughput could force the pipeline to close in the coming decade, leaving millions of U.S. consumers, mostly on the West Coast, without a stable supply of oil. Assessing new supplies in the NPR-A and connecting Chukchi production to the TAPS via the NPR-A will allow the United States to better meet its energy needs through domestic production.

Furthermore, an annual average of 54,700 new jobs would be created and sustained nationwide for 50 years from Alaskan OCS exploration and production. These new jobs would lead to over $145 billion in new payroll and over $193 billion in tax revenue for federal, state and local governments. At a time of fiscal austerity and high unemployment, private development that boosts this level of jobs-and-revenue creation – without taxpayers' money – is critical.

Many of these energy security and economic benefits will fail to realize if the NPR-A is not utilized in a manner consistent with its true purpose: a petroleum reserve. A strong IAP that allows for full leasing of the reserve and for the efficient, legally defensible construction and operation of a pipeline will help ensure American energy consumers have access to these abundant Alaskan resources.

In closing, I would again urge the BLM to adopt Alternative D to clearly provide for the swift development of onshore infrastructure in the NPR-A.

I appreciate the opportunity to comment, and look forward to reviewing the BLM's final plan.

Defenders of Wildlife
(Approximately 58,050 electronic communications)

As a supporter of Defenders of Wildlife and someone who cares about our wildlife and wild places, I urge you to provide maximum protection for all areas of exceptional habitat value as you develop the new Integrated Activity Plan for the for the National Petroleum Reserve Alaska (Western Arctic Reserve). In the Draft Plan recently released by the Department of Interior, Alternative B stands apart as the clear choice to effectively and reliably protect key habitat in the Western Arctic Reserve. The Western Arctic Reserve has exceptional value for many species of fish and wildlife, including millions of migratory birds, Alaska's largest caribou herd, brown bears, wolverines, and marine mammals such as walrus, beluga whales, spotted seals and endangered polar bears. The BLM has recognized several "special areas" within the Western Arctic Reserve including Teshekpuk Lake, the Coleville River, Kasegaluk Lagoon, and Utukok River Uplands. These areas are part of the large wetland complex of lakes, ponds, rivers

and streams on the coastal plain which is globally recognized for its ecological importance. This region provides vital nesting and molting habitat for millions of Arctic birds, insect relief and calving habitat for caribou, haul-outs for marine mammals, and feeding grounds for polar and brown bears. Other areas of exceptional value for wildlife also deserve strong protections through expanded or new "special area" designations under the new plan. These include: the Dease Inlet-Meade River; Peard Bay and adjacent wetlands; and the Ikpikpuk River and adjacent wetlands. I urge the BLM to provide maximum protection for all areas of exceptional habitat value by putting these areas off limits to oil and gas leasing. The BLM must balance oil and gas development with conservation of wildlife, and preservation of subsistence, wilderness and recreation values in the new plan. Thank you for your consideration.

Earthjustice
(Approximately 27,150 electronic communications)

As you consider the first-ever comprehensive management plan for the National Petroleum Reserve-Alaska (Reserve), I ask that you adopt the protection measures in Alternative B in the final plan which are a strong and essential step toward protecting the key wildlife habitat and public land treasures of the Reserve. As you finalize the plan, I ask that you also consider a few additional protection measures to improve Alternative B that will ensure protection for additional high value habitats, including the upper watershed of Kasegaluk Lagoon, the lower Utukok River and the upper Ikpikpuk River.

The 23.5-million acre Reserve, our nation's largest single unit of public land, includes vital habitat areas that support fish and wildlife resources of local, national and global significance. Under law, Congress has specifically recognized that there are special areas and surface values within the Reserve that should be protected from oil and gas development and has provided clear direction for the Department of the Interior to protect these areas.

The conservation measures in Alternative B are an essential step toward balanced management of the Reserve, and would protect many key areas: Teshekpuk Lake and surrounding wetlands, which is a globally-significant nesting area for shorebirds, waterfowl and seabirds and, together with the Dease Inlet area, provides essential calving grounds for the Teshekpuk Lake caribou herd; Peard Bay and surrounding wetlands, a concentration area for multiple marine mammal species and concentrated nesting area for waterbirds; Utukok River Uplands and DeLong Mountains, which include the calving grounds of the Western Arctic caribou herd and habitat for various predators including grizzly bear, wolves and wolverine; Colville River, which harbors exceptional densities of cliff-nesting raptors, and Kasegaluk Lagoon, a unique coastal area vital to polar bear, walrus, ice seals, and beluga whales as well as, a globally-significant migratory bird nesting and feeding area. Additional improvements in protection measures for some of these areas will further ensure protection of the wildlife and ways of life dependent on them.

I urge you to adopt the conservation measures contained in Alternative B as a positive step toward balanced management plan for the Reserve--one that allows for future oil and gas development while also safeguarding key habitat areas that are vital to healthy wildlife populations in America's Arctic.

National Wildlife Federation
(Approximately 21,400 electronic communications)

As you consider the first-ever comprehensive management plan for National Petroleum Reserve-Alaska (Reserve) on the north slope of Alaska, I ask that you adopt a final plan that properly balances future oil and gas development in the Arctic with strong protections for special habitat areas in the Reserve, especially the lands surrounding Teshekpuk Lake and other identified Special Areas, such as Kasegaluk Lagoon and the Utukok Uplands. Teshekpuk Lake is the largest lake in America's Arctic, and the surrounding Special Area includes wetlands, coastline and barrier islands that provide some of the most valuable habitat for caribou and migratory birds in the entire circumpolar Arctic. Birds that breed forage, and stage in the Teshekpuk Lake area migrate south along all major flyways to overwinter in locations throughout the Lower 48 states from coast to coast. I strongly urge you to adopt Alternative B as the management plan for the Reserve. By removing Teshekpuk Lake and other especially productive wildlife areas from oil and gas leasing, Alternative B will ensure reliable protection for a number of critically important arctic habitats while also allowing for responsible future oil and gas development.

Natural Resources Defense Council
(Approximately 43,100 electronic communications)

As you consider the first-ever comprehensive management plan for the Western Arctic Reserve (formally known as the National Petroleum Reserve-Alaska), I ask that you adopt Alternative B and safeguard these natural treasures for all time. Please also include the additional important high value habitats identified by the public, including the upper watershed of Kasegaluk Lagoon, the lower Utukok River, and the upper Ikpikpuk River. As our country's largest public land management unit at more than 23.5 million acres, the Reserve includes vital habitat areas that support fish and wildlife resources of local, national and global significance. Under law, Congress has specifically recognized that there are special areas and surface values within the Reserve that should be protected from oil and gas development and has provided clear authority for the Department of the Interior to protect these areas as would be provided by Alternative B. The protections under Alternative B are essential and appropriate to ensure balanced management of the Reserve. This option would protect the following areas: Teshekpuk Lake and Dease Inlet to protect the calving grounds of the Teshekpuk Lake caribou herd, which is designated as a globally-significant Important Bird Area; Peard Bay and surrounding wetlands to protect a concentrated area for multiple marine mammal species and waterbirds; Utukok River Uplands and DeLong Mountains to protect the calving grounds of the Western Arctic caribou herd and habitat for various predators including grizzly bears, wolves and wolverines; the Colville River to protect exceptional densities of cliff-nesting raptors, and Kasegaluk Lagoon to protect a unique coastal area vital to polar bears, walrus, ice seals, and beluga whales as well as a globally-significant Important Bird Area. I urge you to adopt Alternative B in order to provide the most responsible balanced management plan for the Reserve. This option would allow for future oil and gas development while also safeguarding key habitat areas that are vital to healthy wildlife populations in America's Arctic. Thank you for the opportunity to comment.

Ocean Conservancy

(Approximately 4,600 electronic communications)

The ocean and the land in America's Arctic are closely intertwined. The National Petroleum Reserve-Alaska (NPRA) supports an exceptional diversity and abundance of wildlife and fish that depend upon the health of both ocean and coastal habitats.

Thank you for undertaking the first-ever comprehensive management plan for the NPRA. As you finalize this plan, I urge you to adopt Alternative B. By removing important areas from oil and gas leasing, Alternative B will provide reliable protections for coastal habitat areas that support a variety of marine mammals, migratory birds and fish that also depend for part of their life cycle on healthy freshwater and wetland environments.

The NPRA is the single largest federal land management unit in the nation and includes a series of key habitat areas along the coast, including Teshekpuk Lake, Elson Lagoon/Dease Inket, Peard Bay and Kasegaluk Lagoon. These areas provide vital habitat for marine mammals, including polar bears, walruses, beluga whales and several species of ice-dependent seals. The wetlands along the coast provide important nesting, feeding and staging areas for migratory bird populations of national and international significance. Waterbirds, such as the rare yellow-billed loon, threatened spectacled eider, and brant--a key species for subsistence users--rely on these areas to breed, rest, forage and molt before returning to the ocean to migrate and overwinter.

More than 30 years ago, Congress expressly recognized that the NPRA has exceptional natural, fish, wildlife, scenic, cultural and historical values that warrant protection. And Congress has provided the Secretary of the Interior broad authority to balance resource development activities with "maximum protection" of special areas in the NPRA. I urge you to select Alternative B to provide the strongest and most appropriate protections for key coastal areas in America's Arctic.

Pew Trust

(Approximately 62,900 electronic communications)

Dear Interior Secretary Ken Salazar,

As you consider the first comprehensive management plan for the National Petroleum Reserve-Alaska (NPR-A), I ask that you adopt Alternative B.

This is the only alternative in the draft plan that properly balances future oil and gas development with strong and reliably effective protections for the exceptional wildlife habitat and subsistence resources of the NPR-A.

The NPR-A features exceptional wilderness that is vital habitat for Arctic wildlife. Alternative B provides the best protections for these areas, specifically Teshekpuk Lake/Dease Inlet, Peard Bay and its surrounding wetlands, Utukok River Uplands/DeLong Mountains, the Colville River, and Kasegaluk Lagoon.

Withholding these critical habitat areas in the NPR-A from oil and gas leasing and establishing other protections set forth in Alternative B would ensure reliable protection of crucially important Arctic habitats of local, national, and global significance while also allowing for responsible oil and gas development in the future.

Thank you for consideration of these comments.

Sierra Club
(Approximately 33,200 electronic communications)

I am writing to urge you to establish strong protections for the special places in America's Arctic, its wildlife and its people. As our climate continues to change, and with the Arctic warming faster than any other part of the globe, we must act now to protect habitats for polar bears, beluga whales, seals, caribou, and make sure they have space to roam.

The Wilderness Society
(Approximately 15,850 electronic communications)

The Western Arctic Reserve, also known as the National Petroleum Reserve-Alaska, is a place of incredible beauty and ecological importance. It supports a wide array of Arctic wildlife and a vast wetlands complex that is a nesting ground for migratory bird species from every continent on Earth. Its nearly 23 million acres are an irreplaceable treasure that provide essential food to Alaska Natives for subsistence.

Although the Western Arctic Reserve has a role in meeting our nation's future energy needs, Congress also recognized that areas identified by the Secretary as having significant subsistence, recreational, fish and wildlife, historical or scenic value should be protected.

As the U.S. Department of the Interior develops the first-ever comprehensive management plan for the entire reserve, and takes public comment on the proposed management alternatives, I encourage you to support Alternative B as described in the recently released BLM Draft Plan.

Alternative B is the clear choice to protect key, globally significant habitat areas in the reserve, while also allowing for future oil and gas leasing and development.

Alternative B protects ecologically important special areas with exceptional wildlife and subsistence values that include:

-Teshekpuk Lake/Dease Inlet

-Peard Bay

-Utokok River Uplands/DeLong Mountains

-Colville River

-Kasegaluk Lagoon

Secretary Salazar, you have a historic opportunity in the western Arctic to protect some of the world's most significant wildlife resources that also sustain many Arctic communities.

Alternative B strikes the type of balance Congress intended when it transferred these sensitive lands to the BLM in 1976. Alternative B allows for oil and gas development while at the same time protecting special areas that contain vital wildlife habitat. Alternative B is the clear choice for the Interior Department to fulfill its congressional mandate for the Western Arctic Reserve, and I strongly urge you to support it.

Thank you for considering these comments.

Wildlife Conservation Society
(Approximately 25,250 electronic communications)

As a supporter of the Wildlife Conservation Society (WCS), I write in support of the proposed management option entitled "Alternative B" as the U.S. Department of the Interior's Bureau of Land Management #BLM# prepares the first-ever comprehensive management plan for National Petroleum Reserve-Alaska #NPR-A#. Of the four proposed management options, "Alternative B" appropriately balances needed wildlife protection with development to ensure both globally significant wildlife resources and economic livelihoods of local communities in Arctic Alaska flourish. The NPR-A shorelines and lagoons support exceptional biodiversity among marine mammals including polar bears, walruses, beluga whales, and seals. The area is also important for two large caribou herds and vital for community subsistence among northern and western Alaskan communities, as well as grizzly bears, wolves, wolverines, and arctic foxes. The wetlands of the NPR-A provide vital nesting, feeding, and staging habitats for migratory bird populations, including many that disperse to virtually all states throughout the lower 48 states and are vital for waterfowl hunters. The existing four Special Areas within the NPR-A, including the Teshekpuk Lake Special Area, the Colville River Special Area, the Utukok Uplands Special Area, and the Kasegaluk Lagoon Special Area, still lack permanent protection. Conservation organizations including WCS have identified that these regions need protection because of their exceptional ecological, wildlife, and subsistence values for the marine mammals, birds, and other wildlife that depend on them. "Alternative B" provides an appropriate balance that will allow for substantial oil and gas development while also providing meaningful and reliable conservation protections for the exceptional biological resources of the NPR-A. Adoption of "Alternative B" would provide essential landscape-scale protection in the key areas of the NPR-A, especially the coastal plain around Teshekpuk Lake, which is dense with migratory birds, and in the Utukok Uplands, which are so essential to caribou and their predators alike. I urge you to adopt "Alternative B" as it provides the appropriate balance of wildlife protection and energy development in this largest of public landscapes.

6.3 Substantive Comments

Consistent with BLM's NEPA Handbook, the Final IAP/EIS responds to substantive comments. All of the substantive comments appear in at least one of the printed communications in this chapter. Tables 6-1 and 6-2 list all of the communications printed and the pages upon which they and their responses appear. Table 6-1 lists them in alphabetical order of the commenter; Table 6-2 lists them in order of the communications number. (Note: In the course of processing communications received in many different media, some formatting has been lost from the comments. In several instances, excerpts containing the substantive comments, rather than entire oral statements, are provided.)

Table 6-1. Printed communications listed by commenter

Commenter	Communication Number	Page Communication Begins	Page Response Begins
Alaska Miners Association	41	355	356
Alaska Oil and Gas Association	42	357	365
Alaska Shorebird Group	21	173	176
Arctic Slope Regional Corporation	13	121	131

Table 6-1. Printed communications listed by commenter

Commenter	Communication Number	Page Communication Begins	Page Response Begins
Audubon Alaska, Ocean Conservancy, Pew Environmental Group	22	177	211
Birdnote	23	212	212
Center for Biological Diversity	24	213	242
Citizens' Advisory Commission on Federal Lands	3	77	84
ConocoPhillips Alaska, Inc.	43	366	401
Conservation Lands Foundation	25	249	251
Consumer Energy Alliance	44	408	409
Cully Corporation	14	133	134
Kuukpik Corporation, Native Village of Nuiqsut, City of Nuiqsut	15	135	164
Linc Energy	45	410	416
National Park Service	8	107	110
Native Village of Kotzebue	11	115	116
Nordaq Energy	46	417	421
North Slope Borough	1	33	44
Northern Alaska Environmental Center	26	252	285
Olgoonik Corporation	16	171	172
Resource Development Council	47	422	426
Shell Alaska	48	427	450
State of Alaska	2	47	70
The Nature Conservancy	27	294	298
The Wilderness Society	28	299	331
Trumpeter Swan Society	29	335	336
U.S. Environmental Protection Agency	9	111	114
U.S. Fish and Wildlife Service	6	93	101
U.S. Geological Survey	7	102	105
U.S. Senator Lisa Murkowski	5	86	91
Western Arctic Caribou Herd Working Group	12	117	120
Wildlife Conservation Society	30	337	354
Comments Given at Public Meetings			
Anaktuvuk Pass, May 22, 2012 public meeting			
Andrew Hopson	51	456	456
Dorcas Hugo	52	457	457
Esther Hugo	53	458	458
Sollie Hugo	54	459	459
Anchorage, May 24, 2012 public meeting			
Mary Barr	57	463	463

Table 6-1. Printed communications listed by commenter

Commenter	Communication Number	Page Communication Begins	Page Response Begins
Dave Harbour	55	460	460
Wendy Loya	58	464	464
Lorali Simon	56	462	462
Barrow, May 21, 2012 public meeting			
Rosemary Ahtuangaruak	60	466	467
George Olemaun	59	465	465
Fairbanks, May 23, 2012 public meeting			
Jenna Hertz	62	470	471
Darcie Warden	61	468	469
Ron Yarnell	63	472	473
Nuiqsut, May 16, 2012 public meeting			
Sam Kunaknana	65	475	475
Thomas Napageak	66	477	477
George Sielak	64	474	474
Point Lay, May 14 and June 5, 2012 public meetings			
Danny Pikok	67	478	478
Lola Tukrook	68	479	479
Wainwright, May 15, 2012 public meeting			
Robert Shears	69	480	480
Terry Tagarok	70	481	481
Additional written communications			
Bruce Babbitt	75	482	484
Greta Burkart	76	485	485
Steven Borell	77	487	487
Thomas Cade	78	488	493
Tom Campion	79	495	496
J. Capozzelli	80	497	498
Ronald Clarke	81	499	502
Sean Cochrane	82	503	503
Art Greenwalt	83	504	505
Beth Levine	84	506	506
Debbie S. Miller	85	507	511
Benjamin Moher	86	512	512
Janet Parkins	87	513	514
Stanley Senner	88	515	515
Sue Steinacher	89	516	517
Jim Steitz	90	518	518
Ron Yarnell	91	519	520

Table 6-2. Printed communications listed by communication number

Communication Number	Commenter	Page Communication Begins	Page Response Begins
001	North Slope Borough	33	44
002	State of Alaska	47	70
003	Citizens' Advisory Commission on Federal Lands	77	84
005	U.S. Senator Lisa Murkowski	86	91
006	U.S. Fish and Wildlife Service	93	101
007	U.S. Geological Survey	102	105
008	National Park Service	107	110
009	U.S. Environmental Protection Agency	111	114
011	Native Village of Kotzebue	115	116
012	Western Arctic Caribou Herd Working Group	117	120
013	Arctic Slope Regional Corporation	121	131
014	Cully Corporation	133	134
015	Kuukpik Corporation, Native Village of Nuiqsut, City of Nuiqsut	135	164
016	Olgoonik Corporation	171	172
021	Alaska Shorebird Group	173	176
022	Audubon Alaska, Ocean Conservancy, Pew Environmental Group	177	211
023	Birdnote	212	212
024	Center for Biological Diversity	213	242
025	Conservation Lands Foundation	249	251
026	Northern Alaska Environmental Center	252	285
027	The Nature Conservancy	294	298
028	The Wilderness Society	299	331
029	Trumpeter Swan Society	335	336
030	Wildlife Conservation Society	337	354
041	Alaska Miners Association	355	356
042	Alaska Oil and Gas Association	357	365
043	ConocoPhillips Alaska, Inc.	366	401
044	Consumer Energy Alliance	408	409
045	Linc Energy	410	416
046	Nordaq Energy	417	421
047	Resource Development Council	422	426
048	Shell Alaska	427	450
Comments given at public meetings			
Anaktuvuk Pass, May 22, 2012 public meeting			
051	Andrew Hopson	456	456
052	Dorcas Hugo	457	457
053	Esther Hugo	458	458
054	Sollie Hugo	459	459

Table 6-2. Printed communications listed by communication number

Communication Number	Commenter	Page Communication Begins	Page Response Begins
Anchorage, May 24, 2012 public meeting			
055	Dave Harbour	460	460
056	Lorali Simon	462	462
057	Mary Barr	463	463
058	Wendy Loya	464	464
Barrow, May 21, 2012 public meeting			
059	George Olemaun	465	465
060	Rosemary Ahtuangaruak	466	467
Fairbanks, May 23, 2012 public meeting			
061	Darcie Warden	468	469
062	Jenna Hertz	470	471
063	Ron Yarnell	472	473
Nuiqsut, May 16, 2012 public meeting			
064	George Sielak	474	474
065	Sam Kunaknana	475	475
066	Thomas Napageak	477	477
Point Lay, May 14 and June 5, 2012 public meetings			
067	Danny Pikok	478	478
068	Lola Tukrook	479	479
Wainwright, May 15, 2012 public meeting			
069	Robert Shears	480	480
070	Terry Tagarok	481	481
Additional written communications			
075	Bruce Babbitt	482	484
076	Greta Burkart	485	485
077	Steven Borell	487	487
078	Thomas Cade	488	493
079	Tom Campion	495	496
080	J. Capozzelli	497	498
081	Ronald Clarke	499	502
082	Sean Cochrane	503	503
083	Art Greenwalt	504	505
084	Beth Levine	506	506
085	Debbie S. Miller	507	511
086	Benjamin Moher	512	512
087	Janet Parkins	513	514
088	Stanley Senner	515	515
089	Sue Steinacher	516	517
090	Jim Steitz	518	518
091	Ron Yarnell	519	520

COMMUNICATION NUMBER 1
Charlotte E. Brower, Mayor
North Slope Borough

June 15, 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508
http://www.blm.gov/ak/st/en.html

Re: Draft Integrated Activity Plan and Environmental Impact Statement for the National Petroleum Reserve – Alaska

Dear Sir or Madam:

The North Slope Borough (Borough) appreciates this opportunity to comment on the Bureau of Land Management (BLM) Draft Integrated Activity Plan (IAP) and Environmental Impact Statement (DEIS) for the National Petroleum Reserve in Alaska (NPR-A). The Borough has enjoyed a respectful and productive relationship with the BLM's regional staff and leadership in Alaska. We have now collaborated on multiple NPR-A planning efforts, beginning with the effort that produced the 1998 Northeast Planning Area Record of Decision (ROD). We commend the BLM staff and others who put great effort into the preparation of this comprehensive and complex document. We look forward to continued consultation as a final version of this EIS is produced, and management decisions are made by the Secretary and other officials within the Department of the Interior.

This DEIS presents information and analyzes a range of options for management of the entire 22.6 million-acre NPR-A. The document focuses primarily on the potential effects of oil and gas leasing, exploration, and development within the area. The entire area lies within the boundaries of the North Slope Borough, a home rule regional municipal government chartered and operating under the laws of the State of Alaska. The majority of Borough residents are Inupiat Eskimos, and live a subsistence lifestyle, dependent upon the wild resources of our traditional lands and waters for our physical health and our cultural and spiritual well being.

All of the NPR-A has been used by the Inupiat people for centuries, and continues to be of great importance to the well being of our residents today. It contains habitat unique on the North Slope, and sees exceptional seasonal concentrations of wildlife resources. The region contains important nesting and staging areas for waterfowl, shorebirds, and raptors, overwintering and spawning areas for fish, and calving and insect-relief habitat for caribou. Many of these resource populations, including vast numbers of waterfowl and the Teshekpuk Lake, Central Arctic, and Western Arctic Caribou Herds migrate to, through, and from the NPR-A following relatively predictable patterns. In terms of the numbers of caribou harvested for subsistence, the Teshekpuk Lake Herd is today the most important herd on the North Slope. Scores of traditional subsistence cabins, campsites, transportation routes, and key harvest areas can be found throughout the region. Many significant Inupiat cultural and historic sites dot the landscape.

While always mindful of the critical need to protect the environment and preserve subsistence opportunities, the North Slope Borough and our residents also recognize that our ability to continue to provide even the most basic services to our communities depends largely upon a revenue stream generated by taxes on oil and gas facilities located on land and in waters of the State of Alaska. The potential for oil and gas leasing, exploration, and development in the NPR-A therefore presents difficult questions of priorities and policy for the Borough and other North Slope organizations. A significant westward expansion of facilities from the largely centralized Prudhoe Bay/Kuparuk industrial complex will bring impacts as well as opportunities to

communities, extended families, and individuals not yet directly touched by activities on that scale. The area is utilized by communities housing most of the Borough's total population. Our challenge has always been to find a balance between the need for industry-fueled revenue and preservation of a healthy North Slope environment, healthy subsistence resource populations, and vibrant traditional subsistence culture of our people.

Throughout the past forty years, we have vigorously exercised our authority and influence to see industrial operations sited and conducted to the greatest extent possible in an environmentally and culturally sensitive manner. We have not always been successful in halting or conditioning operations to fully avoid or minimize adverse impacts. Cumulative impacts have occurred, and are only now being acknowledged by industry and the responsible federal and state agencies. [1] For the most part, however, and to some extent because of the Borough's insistence on appropriate conditions, onshore oil and gas operations have been designed and operated without significant long-term effects on the environment, wildlife populations, or the Inupiat subsistence culture.

Because our interests and concerns are complex, our development of a position with respect to a workable NPR-A leasing alternative has not been a simple process of selecting one of those options presented in this Draft IAP/EIS. Instead, after consultation with our affected communities, we have identified our own management proposal, which we hope adequately captures the will of the broader North Slope community. It is our hope that this preferred management alternative accurately characterizes the affected biological and human environments of the region, effectively addresses the reasonably foreseeable impacts that oil and gas operations may have on the resources, uses, and values we recognize as requiring protection, and clearly describes and justifies the identified measures warranted to provide that protection. As the stakeholders most directly facing the impacts of the management decisions the Secretary and the BLM will make concerning the NPR-A, we hope and expect that the Department of the Interior will consider the alternative we propose with appropriate weight and deference.

These comments will be in two parts. First, we will present a North Slope Borough Alternative that is in some ways a combination of different elements of the alternatives presented in the Draft IAP/EIS. We will also provide brief specific comments on the environmental consequences analysis and other materials presented in the document.

We recognize that one stated BLM goal in developing a management plan for the entire NPR-A is to do away with the arbitrary and artificial boundaries that have defined the Northeast, Northwest, and South "Planning Areas." We appreciate and support that goal. However, for the purposes of defining and discussing our suggested management alternative, we will refer at times below to these existing planning areas.

NSB ALTERNATIVE

Generally, **[1.001]** the Borough recommends implementation of Alternative A, but with the southern region of NPR-A also opened for oil and gas leasing. In other words, apply the current package of stipulations and required operating procedures (ROPs) as presented in the 2008 Record of Decision for the former Northeast Planning Area, to the entire NPR-A. The area in the former Northwest Planning Area currently deferred from leasing until 2014 should be included in future lease sales upon expiration of the deferral. The area north and east of Teshekpuk Lake currently deferred from leasing until 2018 should be subject to an additional, targeted planning process before a decision is made to extend the deferral or open the area to leasing subject to appropriate protective measures. Special Areas should remain as currently defined. And, no Wild and Scenic Rivers should be designated.

Northwest 2014 Deferral:

The first deferral area in the existing management scheme for NPR-A is an area of approximately 1.57 million acres in northwestern NPR-A which is deferred from leasing until

January 22, 2014. Our recommendation is that this deferral in northwestern NPR-A be allowed to expire in 2014 as scheduled, and these areas then be included in the annual lease sales.

Northeast 2018 Deferral:

The second deferral area in the existing management scheme for NPR-A is an area of approximately 425,000 acres north and east of Teshekpuk Lake that is deferred from leasing until July 16, 2018. Because of competing values in this area, the appropriate management scheme is much more controversial. Given the current state of the science and resource potential estimates, we conclude that BLM should not make any irreversible decisions about this acreage at this time. Rather, before this deferral expires, the BLM should initiate a new, targeted NEPA review that specifically considers this acreage and whether there are reasonable options to allow leasing of any portion of this area. The schedule of the effort should be timed to produce a Record of Decision and management plan that coincide with the July 16, 2018 expiration of the deferrals.

The area near Teshekpuk Lake is considered to have high oil and gas value, but is also of great importance for waterfowl, caribou, other resources, and subsistence. Both proponents of Alternative B, which would render a broad swath of land around Teshekpuk Lake unavailable for oil and gas leasing, and proponents of Alternative D, which would open the entire area to leasing, argue with equal conviction that science, history, industrial technology and practices, and agency missions, authorities, and responsibilities support their contrary positions.

Proponents of Alternative D have commented that for a variety of reasons, the entire NPR-A should be opened to oil and gas leasing, exploration, and development. They point out that the area was, after all, established as a petroleum reserve. Some argue that the discussion should end with the name. Others argue as well that vast areas of the state are already closed permanently to oil and gas entry. Some talk about balance, the need for Alaskan jobs, reducing our nation's dependence on foreign oil, and protecting our national security. Still others point to the industry's 40-year record of, largely, safe operation on the North Slope.

Proponents of Alternative B point out that the arguments in favor of opening all areas to leasing ignore certain critical facts. Production of even the most optimistic estimates of potential oil and gas reserves in the region will not significantly reduce our dependence on foreign sources of supply. The estimates of reserves in the region have in fact fallen by some 90% in recent years. And, many jobs that may ultimately be created by expanded exploration and development will be filled by workers not currently residing in Alaska.

Most troubling, arguments in favor of leasing the area ignore both the needs and concerns of the Alaskans who directly depend upon the wildlife and other resources of the NPR-A for their physical and cultural health. All areas are not equal in terms of their importance to wildlife, and therefore, to subsistence. The wealth of credible science makes it clear that in certain areas, oil and gas facilities and operations would be incompatible with the continued health of wildlife populations that are critical to the subsistence needs of 50 or more communities in northern and western Alaska, and to the integrity of the region's broader ecosystem. The science indicates, and we believe, that it is not acceptable to disturb caribou in their calving and insect relief areas, and key migratory corridors, that it is not acceptable to disturb concentrated populations of migratory waterfowl, shorebirds, and raptors in their nesting, brooding, and molting areas, and that it is not acceptable to disrupt natural hydrologic patterns to the extent that fish populations in the region could be significantly impacted.

The economic well-being of the Borough depends on new oil and gas leasing, exploration, and development and our longstanding and consistent policy has been that all lands that can safely be explored should be offered for lease. However, in certain limited areas, permanent surface facilities and their associated activities cannot be made compatible with critical resource concentrations or subsistence uses. And, it becomes more difficult to restrict operations, including the placement of surface facilities, on a particular tract once it has been leased and explored, and economically recoverable hydrocarbons have been found. So it is best to identify

areas where no surface facilities should be placed now, before leasing. Those areas should either not be leased, or should only be accessed through extended reach drilling.

The areas north and east of Teshekpuk Lake have extraordinary surface values. For us, the fundamental question is whether any assemblage of identified mitigation measures can effectively protect the critical wildlife resources and subsistence harvests that occur within those portions of the planning area. We are not now aware of significant new wildlife or subsistence data, or industry technologies and practices that have been reported since the 2008 Supplement was adopted that would justify opening areas that are now closed to leasing. It was determined after significant consultation and analysis leading to adoption of the existing plans that no package of mitigation measures could provide appropriate protection within the areas either left closed to leasing or closed to surface facilities. It was concluded as well that newly recognized but poorly understood stresses arising from climate change only amplified the need for caution and for the wildlife resources dependent upon these areas to be protected from the potential impacts of oil and gas activities.

Just one example of critical information that is now lacking is discussed in a paper recently produced by scientists with the BLM, State of Alaska, Borough, ConocoPhillips, and the private firm Alaska Biological Research, Teshekpuk Caribou Herd Movement through Narrow Corridors around Teshekpuk Lake, Alaska (Yokel, Prichard, Carroll, Parrett, Person, and Rea). The paper notes that BLM has acknowledged the importance of the two narrow land areas constricting caribou movement around Teshekpuk Lake to the Teshekpuk Caribou Herd (USDOI BLM 2008). The authors found that GPS collar data suggest that caribou do not consistently favor specific paths through the constricted zones, so there may not be a "best" pipeline route should such infrastructure be proposed there. These results, however, were based on a relatively small sample of 22 caribou, and a larger, satellite collar dataset displays variability among years but longer-term trends. The authors concluded that additional years of GPS data collection are necessary to discern any real trends in caribou routes through these critical areas.

However, it seems unlikely that BLM's understanding of the unpredictably changing ecosystem of this region will remain static over the next six years. Several circumstances have changed since the recent prior planning efforts, requiring changes in the analysis of this plan, including:

- A change in the price of oil
- Updated Information on Economically Recoverable Oil and Gas
- North Slope Development
- Chukchi Sea Development
- Changes to Special Status Species
- Additional information, including relevant new studies related to surface resources, public health, and climate change. [2]

Each of these circumstances will have changed in some meaningful way yet again in the near future.

Other developments and changes can also be anticipated. One can hope and expect that the oil and gas industry will have improved its technologies and practices before 2018. There will likely be more targeted work required to consider and analyze new and changed circumstances, new ecological and other information, new technologies, new best management practices, and new impact mitigation options. In addition, more will certainly be known concerning the status of Chukchi Sea exploration and transportation needs that will have implications for NPR-A management. Ultimately, given the record of changing circumstances on the North Slope and our anticipation that circumstances will continue to change, it is premature for BLM to make critical decisions now regarding the future of this area at six years before those decisions could have any functional effect.

The Borough generally supports continued leasing, exploration and development of onshore oil and gas resources, but we also have an important responsibility to ensure that the subsistence

resources and hunts are protected. The current science and package of mitigation measures do not demonstrate that the areas north and east of Teshekpuk Lake can be opened to oil and gas leasing while adequately protecting important surface values. However, it is possible that in the coming years changing circumstances, additional research, better technology, development of more effective mitigation measures could, in principle, create a situation where leasing in the region could be acceptable. Depending upon the evaluation of adverse impacts compared to benefits to Borough residents, we may be open to leasing and operations in certain of these areas in the future. However, as no package of mitigation measures currently defined provides adequate protection to resources in this region, additional research and planning efforts would be necessary to support such a decision. A new, targeted NEPA review coordinated with the expiration of the deferral would evaluate what circumstances have changed in the intervening six years and present the opportunity for a timely, informed planning decision.

Pipeline From the Chukchi Sea:

Section 1.1 states that "the IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct necessary onshore infrastructure, primarily pipelines and roads, to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope."

Construction of a pipeline, roads, and other infrastructure necessary to bring Chukchi Sea resources to the TAPS system would significantly affect the region's environment, and would therefore require not simply a "NEPA process," but a full EIS. If this is BLM's expectation as well, it should be indicated. Such a determination would not be premature given the clear significant scope and potential impacts of a project of that scale. This document notes that the location of pipelines within the NPR-A would depend on "the location and sequence of commercial-size discoveries" (Vol 2, Page 40). The review of potential pipeline corridors in such an EIS should also consider placement of a pipeline near previously identified but otherwise uneconomic oil and gas accumulations. This future planning effort should consider all available information regarding resource potential in the region, rather than relying on the USGS 2010 assessment alone.

The Borough has long been opposed to offshore oil and gas operations because of the potential for impacts to marine resources and subsistence harvests. We have worked with Chukchi Sea lease holders and the responsible federal agencies for several years now, however, and it is our expectation and desire that should sufficient oil reserves be discovered in that region, they will be transported to market via a subsea pipeline to shore, then via an above-ground pipeline which, by necessity, would have to cross the NPR-A before joining with the TAPS pipeline system. Conversely, the Borough will oppose any proposal to use tankers to transport produced Chukchi Sea oil to market. We strongly urge the BLM to avoid a management structure for the NPR-A that in any way incentivizes the use of tankers over a pipeline, or makes the permitting of an NPR-A pipeline so onerous as to push producers toward a more environmentally risky tankering option.

Mitigation Measures:

We commend BLM for being open to crafting and implementing innovative means of mitigating the potential effects of oil and gas leasing and operations within the NPR-A. We note, in particular, the agency's development of more flexible blended performance-based and prescriptive measures, and your willingness to undertake meaningful comprehensive human health impact assessments (HIAs) as components of recent planning efforts. Critically, the BLM showed its commitment to addressing the health issues through inclusion of HIAs as more than academic exercises, but as the bases upon which to design appropriate measures to manage potential impacts identified by the assessments.

Also significant has been BLM's recognition that it does not possess a full ecological understanding of the vast individual planning areas or entirety of the 22.6-million acre NPR-A.

The inclusion, most recently in the 2008 Northeast Supplement ROD, of a slate of measures that require site-specific, multi-year, pre-development monitoring for lease tracts within prescribed areas was a creative approach to the challenge of managing large areas, reflects our shared commitment to science-based management, and can only improve decisions regarding project proposals in areas subject to those measures.

The Borough strongly encourages the BLM to retain these mitigation strategies, and apply them throughout the NPR-A.

Special Areas:

Special Area (SA) designations do not themselves impose specific protections, but instead highlight areas and resources for which the BLM will extend "maximum protection" consistent with oil and gas exploration and development within the Reserve. SA designations attach a level of scrutiny and protection independent of this planning effort; but they do not prohibit oil and gas leasing, exploration, or development. SA designations indicate to managers and the public the importance of certain lands and the need to consider the appropriate protection of surface resources consistent with oil and gas activities. Designation would allow for management of these areas designed specifically to protect their unique values and uses, and would not permit later piecemeal degradation of protections under the pressure of multiple future development proposals.

Special Area designations can be structured not to limit subsistence use while placing reasonable restrictions on other facilities and uses. We are open to such designations as potential tools for protecting limited critical areas. The starting point for our support is that there can be no further restrictions on subsistence use or access. The Borough must be a party to any discussions and decisions regarding specific protective provisions proposed within any newly designated or expanded special areas.

Wild and Scenic River Designation:

Wild and Scenic River (WSR) designation does not bring specific protections or prohibitions. However, we are concerned that such a designation would open the door to measures that would restrict subsistence use and access.

The Wild and Scenic Rivers Act (WSRA) provides that any river included in the national wild and scenic rivers system "shall be classified, designated, and administered" as "wild," "scenic," or "recreational." These classifications are defined as follows:

Wild river areas – Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

Scenic river areas – Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Recreational river areas – Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

BLM's proposal in Alternatives B and C with respect to Wild and Scenic Rivers is to classify and administer certain rivers as "wild." We oppose any designation which would restrict our residents' use of an area. Administering the rivers and river corridors as "wild rivers," would mean administering these rivers as "essentially primitive." This could involve limiting access with motorized vehicles, developments by native allotment owners, or other activities conducted by residents in areas traditionally used and accessed for subsistence purposes. These designations could also prematurely prohibit appropriate development or construction in the region. Thus, we oppose these designations.

Additionally, we note that BLM's Land Status Map 1.1 indicates there are native allotments along some of these rivers identified as eligible for designation as "wild" rivers. BLM must seek out and consult with these specific landowners before taking any action that may affect how the area near their allotments is managed.

SPECIFIC COMMENTS

Volume 1
Chapter 1

[1.002] As mentioned above, Section 1.1 should be changed to reflect that any proposal to construct necessary onshore infrastructure, primarily pipelines and roads, to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope should trigger an EIS review under NEPA.

Essential Fish Habitat

[1.003] p. 68, 2.1 Pacific Salmon, states "They are fairly abundant in the Chukchi Sea (Moss et al. 2009), but much more limited in the Beaufort Sea." Please provide a citation for the "more limited" presence of pacific salmon. The excerpted statement may be incorrect as most salmon caught in subsistence nets occurs in the Beaufort Sea at Elson Lagoon.

Volume 2
4.2.1 Ground-impacting Management Actions

[1.004] p. 38. 4. Miscible Injection and Fracture Stimulation states: "Leakage of fluids or natural gas from hydraulic fracturing activities has been blamed for the compromising (of) ground water quality in areas where it has been used improperly to enhance gas production from tight sands and shales." The characterization of leakage being the result of "improper use" should be clarified. If sometimes fracturing is conducted as planned, but the impacts are still far more than predicted, that should be acknowledged. Also, this section should address other concerns related to this practice, including the claim that "for every million gallons [of water injected], 200,000 to 400,000 gallons will be regurgitated back to the surface." (see McGraw, Seamus, The End of Country. This citation is from "Why not frack?" 8 March 2012, The New York Review of Books, Vol. LIX, #4, reviewed by Bill McKibben, pp. 13-15).

4.2.2 Spills and Releases
p. 76, the first paragraph concludes: "For further details, please refer to appendix K." p. 77, 4.2.2.1 states: "The information, models, and assumptions used to analyze the potential for oil spills are described in Appendix K." There is no Appendix K in the document, however, and it appears the references should have been to Appendix G: Information, Models, and the Assumptions Used to Analyze the Effects of Oil Spills. See also the footnote to Table 4-17.

[1.005] p. 77, Paragraph 3 states: "Most Alaskan North Slope industry spills have been contained on gravel pads and roadbeds (National Research Council 2003), and most of those that have reached the tundra have covered fewer than 5 acres (Nuka Research and Planning, 2010). Also, as noted above, snow cover and low temperatures through much of the year also reduce the ability of leaked oil to spread. Upon detection, spills have been promptly contained and cleaned up as required by state, federal, and North Slope Borough regulations (National Research Council 2003)." Paragraph 3 should note, as does paragraph 2,the key problem with "detection" is "the same conditions that allowed [large spill volume] to continue undetected were snow cover and low temperatures." Both these points need to be made each time since "upon detection" is the key point. The "snow cover and low temperatures" not only "reduce the ability of leaked oil to spread" but also reduce the ability to detect.

[1.006] p. 79, "Table 4-16. Assumed large (500 barrels (bbl) or greater) crude oil spills over the development life of the National Petroleum Reserve-Alaska." While the text of the associated section in places refers to "exploration and development," it is unclear what "development life"

means in this context, and how the potential for spills is broken down between those two phases of operation.

[1.007] p. 82, Spills on Tundra, states: "Oil movement over the ground surface follows the topography of the land (i.e., oil flows downhill)." However, the document should consider whether oil could flow with water gradients "uphill." The work by Dr. David Barnes at University of Alaska Fairbanks (UAF) has researched water movement in gravel pads within the North Slope oil fields. Dr. Barnes has evidence of water flowing into and out of the pads and considers contaminate flow. He specifically notes: "We found the pad pore-water gradient to change in both magnitude and direction throughout the monitoring period. At the edges of the pad (a distance of 20 to 30 meters into the pad), gradients changed from water flowing into the pad from surrounding tundra ponds to water flowing out of the pad into tundra soils depending upon the time of the season and on precipitation events" (from Abstract, "Temporal Changes in North Slope Gravel Pad Pore-Water Gradients," Section E: Contaminates from Mining and oil and Gas Operations in Cold Climates, conference Contaminants in Freezing Ground (24-28 May 2010) Kingston, Ontario). This research has implications for pad construction, abandonment, and reclamation of sites, and should be considered in the impact analysis in each of those contexts for each of the alternatives.

[1.008] pp. 85-86, The National Petroleum Reserve – Alaska Oil-Spill Experiment: This discussion should include an acknowledgement that "the oil remaining after five years had virtually the same chemical composition, but there was some loss of those hydrocarbon compounds with fewer than 13 carbon atoms (presumable from biological degradation)" (Barsdate et al. 1980, p. 405). In addition, "one genus, Tanytarsus, was nearly eliminated from the ponds. Beetles, caddis flies, stoneflies, and snails were also drastically affected . . . These insects were still absent in Pond E6 years after the spill" (Barsdate et al. 1980, p. 406)." Since these insects are important prey items for migratory waterfowl, their prolonged absence following larger spills could have important energetic consequences to waterfowl.

[1.009] p. 86, Gas Releases 4.2.2.2: This section should be updated to include the recent Repsol blowout on land in the Colville River Delta near the Beaufort Sea coast.

4.3.7.2 Oil and Gas Exploration and Development Activities
Effects of Seismic Surveys

[1.010] p. 140, states: "energy reserves are greater for fish in summer than in winter, and eventual mortality from energy expenditure is less likely." This is not necessarily the case. In fact, energy reserves may be greater in winter in anticipation of overwintering.

[1.011] p. 150, Effects of Causeways. This section should cite the 2011 paper, "The Impact of the Endicott Causeway on Sediment Transport in the Sagavanirktok River Delta, North Slope Borough", Garrett C. Yager. MS, UAA. This thesis confirms altered hydrodynamics due to the presence of the causeway, resulting in an influx of sediments and "indicating that the causeway has had an impact on the natural sediment transport in the delta" (149).

[1.012] p. 151, Effects of Oil Spills and Gas Releases. The section does not specifically address saltwater infiltration against river currents along the NPR-A coastline, which is approximately 1,200 miles. This is important since, as an example, Arctic and least cisco move from the Beaufort Sea to the Nigliq Channel. There is also a movement of saltwater up the freshwater channel to near Ocean Point (C. George, Per. Comm., and Seigle et al., 2010). These effects may therefore allow naturally or chemically dispersed oil from a spill to move up the freshwater channel too. This should be acknowledged. Seigle JC, JM Gottschalk, JR Rose. Fall 2010 Subsistence Fishery Monitoring of the Colville River. Final Report. 2010. ABR, Inc. July 2011.

4.3.11.2 Special Status Species of Birds
p. 229, "After 2014 many protections would no longer apply to Kasegaluk Lagoon under Alternative A." This statement should also be placed in Table 2-1, Vol 1, p. 24, at the very least as a footnote in Table 2-1.

[1.013] p. 237, The following need citation and more in-depth explanation: "Low tundra relief and topographical features in the NPR-A would limit the spread of oil and, during the summer, coastal tundra has the ability to absorb large quantities of oil also limiting the spread of the spill." The latter part of the quote infers coastal tundra functioning as an absorbent in special status species areas, but this statement does not address clean-up.

4.3.11.5 Potential New Mitigation Measure

[1.014] p. 269 and 270, Potential Mitigation Measure 3—Aircraft Avoidance of Walrus Aggregations (Addition to F-1 Required Operating Procedure), reads: "Requirement/Standard: (add as new subparagraph) Aircraft traveling along the coast shall maintain minimum altitude of 1,500 feet and a 0.5-mile buffer from aggregations of walruses, unless doing so would endanger human life or violate safe flying practices." The Borough suggests increasing the buffer to1 mile and the minimum altitude of 3,000 ft. for all helicopters per USFWS regulations. Walrus have been shown to be much more sensitive to helicopters than fixed wing aircraft.

[1.015] p. 140-141, Seismic surveys in deep lakes (>7 meters) should not be permitted because eggs and fish larvae may be killed. In addition, responsible agencies and/or lease holders should be required to investigate the effects of seismic surveys/vibroseis on fish auditory sensor cells prior to conducting these activities. Fish spawning and wintering habitat studies should also be conducted prior to potential disturbance.

[1.016] p. 145-146, There should be a better design for seawater intake ports. This design was used in 1985 and there is much better technology to prevent the intake of fish with the seawater. It is unacceptable that an older, less efficient design will be used 27 years later.

p. 146, The impacts associated with instream and floodplain gravel mining are well-understood, and pose a recognized risk of negative effects on freshwater, anadromous, or marine fish. A scarcity of gravel within much of the NPR-A will likely challenge the economics of development prospects, and the pressure will be great to allow mining of whatever sources are closest to discovered resources. Despite the existence of protective statutes and regulations, the current State administration has shown little commitment to strict application and enforcement of these measures when fish habitat has been threatened by proposals for industrial development. The existence of State protective measures should not be held out as support for a conclusion that impacts to fish, fish habitat, and subsistence can be minimized without an analysis of when and how diligently the State has applied those measures. **[1.017]** Gravel mining should not be permitted where significant impacts to fish and fish habitat are projected, and no exception should be granted based on economic infeasibility alone.

[1.018] p. 171, Prior to exploration and development activities, surveys should be conducted in the vicinity of planned operations and facilities. Surveys should estimate the types and numbers of predators in the area, so that changes in their abundance can be detected after exploration and development begin. Predator monitoring and control plans should be features of any exploration and development proposal, and should be implemented and enforced during all such operations.

p. 204-206, aircraft and vessel traffic: The disturbance of ice seals and walrus may be more significant than acknowledged as there will be many more support vessels and more aircraft traffic associated with any of these planned activities. Also, with offshore development taking place as well, disturbance effects are geographically and temporally staggered and thus cumulative. There is some Canadian literature from the 1960s that suggests that seals become chronically disturbed by permanent facilities and traffic, and as a result, become more difficult for subsistence hunters to take.

[1.019] p. 215, Seismic. The section is very speculative; seismic effects (i.e. cochlear pathology studies) on ice seals have not been assessed. The potential for seismic to affect fish, the major food of the ice seals, should be discussed in terms of the secondary effects on the seals. Our elders recall that early seismic operations on frozen North Slope lakes caused fish die-offs.

Adequate ringed seal lair detection may not be feasible. Seal pup abandonment by mothers and "starveling" syndrome could be a consequence. It could affect the regional recruitment for a whole year.

[1.020] p. 217, Travel and Shipping: Strict Ballast water and discharge mitigation measures need to be put in place. The Arctic Ocean is increasingly vulnerable to establishment of non-native species (fauna and flora).

Contaminant Spills and Discharge: There is an estimated 28-37 % probability of oil spill with facility or pipeline. Although Alaska has a reasonable good track record, the event in the Gulf of Mexico illustrates that human error, sloppiness, unforeseen kickbacks, replacement of experienced crew with new people, blowout preventer defect, or other factors can lead to disasters (contextual nature of attributes that organize themselves to a new system and change outcome). The Fukushima event is another example. There is a new appreciation that forecasts should actually include the unpredictable extreme events (non-stochastic event). Regardless of the calculated probability of a major oil spill, it is possible, so the question is what measures are implemented to deal with one.

Volume 3
4.7.4 Cumulative Oil Spills

[1.021] pp. 64 and 65, It is unclear how the price of oil is being used in this section. The text notes: "All of these scenarios are predicated on high oil/gas prices (above $60)." But, Footnote 4 to Table 4-40 states: "the reserves, resources, and large spill numbers assume an oil price of $160/barrel. At a price of $60/barrel, Bureau of Ocean Energy Management estimates the reserves and resources at 2.35 billion barrels and two large spills (USDOI Bureau of Ocean Energy Management 2011)." It is unclear whether this DEIS uses an oil price of $160/barrel or $60/barrel for the entire analysis, or different price assumptions for different purposes. Finally, paragraph 3 on p. 66 states: "The estimated Arctic Outer Continental Shelf pipeline large spills (1-8, again depending on price assumptions) could occur either onshore or offshore." But, footnote 4 to Table 4-40 specifies 2 large spills. It should be made more clear what number(s) of large spills are assumed for this analysis.

Gravel Use

[1.022] p. 57, Table 4-39. Industrial disturbed areas on the North Slope, 1968 to 2001 (in acres): Table 4-39 is unclear. The table recites a disturbed area of 332 acres/year for the Dalton Highway Does it mean that 332 acres are disturbed each year for the highway? If so, it is difficult to understand how it is exactly 332 acres/year for all of the years. On the other hand, the Dalton Highway is 414 miles long and approximately 28 feet wide (in summer). If the figure given is meant to represent the acres disturbed by the highway itself, then it should be closer to 1405 acres rather than 332. Please clarify.

4.7.5.3 Wetlands and Floodplains

[1.023] p. 67, "Under a Memorandum of Agreement between the EPA and Army Corps of Engineers, it is recognized that in areas such as the North Slope of Alaska, avoidance or compensatory mitigation may not be practical due to the high proportion of land that is wetlands. The EPA and Army Corps of Engineers are working with industry to develop alternate methods to satisfy necessary compensation requirements for loss of wetlands on the North Slope." Comment on these alternate methods is not possible when they are not presented. By providing alternatives before an activity begins, discussion can occur regarding the best means of preventing habitat damage before the damage occurs. Focusing on the need to restore habitat or compensate for damage after the fact is less efficient, unpredictable, and often more costly. The last sentence comes from this DEIS itself (p. 67, section 4.7.5.4) and should be followed in terms of Wetlands and Floodplains.

CONCLUSION

Among all stakeholders, the future management of the NPR-A is of the greatest importance to the Inupiat people of the North Slope. We expect to play a meaningful role in the remainder of this IAP/EIS planning effort, as well as in any future planning efforts and management. As we embark on a process which may lead to the industrialization of vast areas of the North Slope for decades to come, it is in the best interest of all agency, industry, community, and public stakeholders that we proceed as true partners and neighbors. Information gaps must be filled to improve decision making. Research priorities must be identified and fully funded in a timely manner and over sufficient periods. When appropriate, monitoring programs must be conducted to assess impacts. Provision must be made in permits for revision of operating conditions if activities or associated effects are shown to be greater than were predicted. Traditional and contemporary local knowledge must be respected and given meaningful consideration in management decisions. Permitting agencies must provide industry with needed consistency and predictability. Industry must be held to reasonable performance standards, and bear the burden of demonstrating that proposed activities will not significantly affect the region's environment, wildlife resources, or subsistence activities. To the greatest extent possible, operators must be required to consult with the Borough and affected communities before they initiate any potentially impacting action, and as operations are conducted. Finally, appropriate provisions must be made and aggressively enforced requiring the return of our lands to the greatest extent possible to their natural state after industrial operations cease.

We have attempted in developing the North Slope Borough Alternative described above to allow for the most leasing, exploration, and development possible while providing sufficient assurances to our residents that their environment, wildlife resources, and subsistence culture will be protected. We have encouraged caution, and responsibly postponed critical decisions about the most controversial areas of the NPR-A until those decisions have to be made and can be made with the best and most current data. We recognize that industry must go where the oil and gas are, but industry and the BLM must recognize that the Inupiat people have occupied these lands and waters for centuries and will still occupy them long after the oil and gas are gone. We look forward to continuing our work with your agency as this planning process proceeds to the next phase, and encourage you to maintain close contacts with the affected communities as you draft the Final IAP/EIS.

The Borough supports, and is in fact dependent upon, continued oil and gas leasing, exploration, and development on the North Slope. We can only support leasing and operations, however, when it can be demonstrated with a high degree of certainty that they can be conducted without unduly impacting our wildlife resources and our subsistence harvests. We must first be part of any process that determines whether there is sufficient current and credible information upon which to make responsible decisions concerning our traditional lands, and then a party to any management decisions that are ultimately made.

Thank you for considering these comments.

Sincerely,

Charlotte E. Brower
NSB Mayor

[1] See e.g., BLM, Northeast NPR-A Supplemental IAP/EIS, Section 4.7.7 Cumulative Impacts (2008) (Acknowledging occurrence of cumulative impacts to air quality, bird habitat, caribou habitat, and subsistence uses).

[2] Executive Summary at i-ii.

[Response to 1.001]
The BLM considered the North Slope Borough's suggestion for delaying a decision on making the lands north and east of Teshekpuk Lake available for leasing until after a "targeted planning process" to coincide with the expiration of the current deferral in 2018. While this would introduce a different decisionmaking process, the impacts from such a process are within the range of alternatives analyzed in this IAP/EIS, and the different decision-making process offers no environmental advantages for these lands over that provided by the preferred alternative.

[Response to 1.002]
While the presumption would be that an environmental impact statement would be the appropriate NEPA analysis for a major project such as infrastructure for Chukchi Sea development, that determination will be made at the time of application by multiple federal agencies, not just the BLM, at which time the scope of any such project will be known.

[Response to 1.003]
The text has been modified.

[Response to 1.004]
Under approved drilling operations where wellbore integrity is maintained, hydraulic fracturing fluid is confined to the inside of the production casing, the formation being treated, and adjacent formations. Casing strings (sections of steel pipe connected and lowered into a wellbore) provide for the isolation of groundwater resources from the inside of the well.

As important as casing is, cementation of the casing adds the most value to the process of groundwater resource protection. Proper sealing of annular spaces (e.g., the space between two concentric objects, such as between the wellbore and casing) with cement creates a hydraulic barrier to both vertical and horizontal fluid migration. Consequently, the quality of the initial cement job is a critical factor in the prevention of fluid movement from deeper zones into groundwater resources.

However, fracturing fluids under sufficient bottom hole pressure can enter a fresh groundwater zone via a conduit, such as an open annulus, through which the fluid can flow between the casing and the formation. Fluids can also enter fresh groundwater if there is a hole in the casing above the depth of the groundwater zone and the cement outside of the casing is not adequate to prevent fluid flow between the casing and the formation.

[Response to 1.005]
The text has been modified to reflect the commenter's concerns.

[Response to 1.006]
The potential for spills is not broken down for the two phases of operation but is over the entire life of exploration and development. The text has been amended to reflect this clarification.

[Response to 1.007]
The text has been modified and references the work of Dr. Barnes and others.

[Response to 1.008]
The text in Section 4.2.2.1 The National Petroleum Reserve – Alaska Oil-Spill Experiment: has been modified to reflect the commenter's concerns.

[Response to 1.009]
The text in Appendix G, Section Historical and Statistical Alaska North Slope Blowout Information has been modified to include the Repsol blowout where gas and drilling mud was released. Section 4.2.2.2 discusses loss of well control as a causal factor for a gas release and includes the rate for loss of well control and a gas release. "The gas produced in the NPR-A is expected to be dry gas (no water or condensates). This analysis identifies three general types of potential gas releases: (1) from loss of well control at production areas, (2) from ruptured gas pipelines, and (3) from gas processing facilities. This section summarizes the key variables used

for gas release analysis. For further details on any of these points, please refer to appendix G. Loss of well control is estimated at 3.6 x 10-4 gas blowouts per exploration well and 7.0 x 10-4 gas blowouts per development well drilled by the International Association of Oil and Gas Producers (2010). The production well-control incident rate for production of gas is 5.7 x 10-5 blowouts per well year (OGP 2010). While gas blowouts occur at a very low frequency, for purposes of analysis, a well-control incident was assumed to occur and the impacts of a gas release from a well were analyzed." Section 4.2.2.2 "Gas Releases" outlines the scenarios and each resource category discusses the effects under the section title "Effects of Spills and Gas Releases."

[Response to 1.010]
The text has been modified.

[Response to 1.011]
The text has been modified.

[Response to 1.012]
The text has been modified.

[Response to 1.013]
For a discussion of oil spills, including spill response, see section 4.2.2.

[Response to 1.014]
The potential mitigation measure has been modified to reflect the higher helicopter height restriction.

[Response to 1.015]
The best available information to date has been used to analyze potential impacts to fish at all life stages from seismic surveys. Additionally, a new potential mitigation measure with the objective to "Minimize the effects of high-intensity acoustic energy from seismic surveys on fish" is proposed in the fish sections for Alternatives A, B-1, C, and D. Available information on specific overwintering fish habitat areas can also be used during permitting to further reduce potential impacts. Any new knowledge gained prior to permitting (such as studies of effects on fish auditory sensor cells) would be incorporated into the NEPA evaluation of that proposed activity, with additional mitigation measures to reduce the likelihood of impacts.

[Response to 1.016]
The text has been modified.

[Response to 1.017]
Gravel mining in the NPR-A will be permitted on a site-by-site basis, with an evaluation of potential impacts to fish and fish habitat at each location, and will incorporate any necessary permit-specific mitigation measures to reduce those potential impacts. The purpose of the "Effects of Gravel Mining" (on fish) section in the EIS is to identify what is known about impacts on fish from past studies and activities, which will help land managers try to avoid those issues in the future.

[Response to 1.018]
The BLM in its preferred alternative would require and implement a management approach that will require industry to fund baseline studies, monitoring and adaptive management programs. The specifics of these studies and programs will be developed when a plan for oil and/or gas development is submitted to the BLM and would undoubtedly include monitoring of predator populations.

[Response to 1.019]
The ice seal sections of 4.3.10.2 in Chapter 4 (Environmental Consequences), Alternative A, Marine Mammals, "Oil and Gas Exploration Activities" and 4.3.11.4, Special Status Species of Marine Mammal, "Oil and Gas Exploration and Development Activities" were modified to

expand on discussions of potential impacts of seismic activity on ice seals, particularly in regards to hearing damage and to impacts on prey resources.

Please refer to section 4.3.7.2 in Chapter 4 (Environmental Consequences), Alternative A, Fish, "Oil and Gas Exploration and Development Activities" for a discussion on the effects of seismic surveys on fish. The early seismic operations on frozen lakes wherein elders noted that fish died are likely the dynamite-based seismic surveys conducted on Teshekpuk Lake during the winters of 1974 and 1975 and described in this section. In 1991, Alaska Department of Fish and Game effectively banned the use of dynamite directly within or over water bodies, ending the practice noted above.

[Response to 1.020]
Regulation of shipping discharges into the Arctic Ocean may be beyond BLM's authority in certain instances. The IAP/EIS addresses ballast water discharges within three miles of the coast in new Potential Mitigation Measure 2 in the Marine Mammals impact discussions of Chapter 4 and has been adopted as part of the preferred alternative's Stipulation K-6.

[Response to 1.021]
The Bureau of Ocean Energy Management considers a price range of $ 60.00 to $160.00 (average price in constant dollars) in their resource assessments (USDOI, BOEM 2012). BLM chose a conservative price of $160 dollars a barrel, at the high end of the range, to estimate cumulative Outer Continental Shelf large oil spills over approximately 90 years (2012-2100). The number in the Table 4-40 in the column titled "assumed number of large spills for analysis" is the value used in the analysis of cumulative oil spills in NPR-A out to 2100. The text in section 4.7.4 discusses that " For purposes of analysis, the estimated large Outer Continental Shelf pipeline spills were allocated equally to offshore and onshore..." and the footnote 6 describes how those spills are equally located to onshore and offshore.

[Response to 1.022]
The table, which shows the total acres disturbed and not rehabilitated as of the indicated year, has been corrected to reflect that the road was not in place in 1968 and 1973 and to more accurately reflect the acres that were disturbed within the North Slope.

[Response to 1.023]
The text has been revised to describe the final rule jointly developed and promulgated in 2008 by the U.S. Army Corps of Engineers and the Environmental Protection Agency.

COMMUNICATION NUMBER 2
Daniel S. Sullivan, Commissioner
State of Alaska Department of Natural Resources

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
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SEAN PARNELL, Governor
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June 13, 2012

Mr. Bud Cribley
NPR-A Planning Team Leader
Bureau of Land Management
222 West Seventh Avenue, No. 13
Anchorage, AK 99513-7599

RE: Integrated Activity Plan (IAP) Draft Environmental Impact Statement (DEIS) for the National Petroleum Reserve-Alaska (NPR-A)

Dear Mr. Cribley,

The State supports the overall intent of this planning process to provide further opportunities for oil and gas exploration and development in the National Petroleum Reserve - Alaska (NPR-A); however, we continue to have serious concerns about certain aspects of the plan. **[2.001]** The statement of purpose and need for the Integrated Activity Plan (IAP)/Environmental Impact Statement (EIS) includes determining the appropriate management of all Bureau of Land Management (BLM)- managed lands in the NPR-A "in a manner consistent with existing statutory direction," yet the plan selectively disregards congressional direction provided under the Naval Petroleum Reserves Production Act of 1976 (Production Act), as amended; the Alaska National Interest Lands Conservation Act (ANILCA); and the Federal Land Policy and Management Act of 1976 (FLPMA); and inappropriately applies administrative policy to the NPR-A. Instead of planning for the NPR-A for the purpose for which it was established - as a Petroleum Reserve - the draft plan implies the area should instead be managed as a conservation system unit.

The State opposes the creation of deferral areas for oil and gas leasing with indeterminate durations. In regard to the North Teshepuk and Kasegaluak Lagoon deferrals, the DEIS says that lands in these deferral areas will become available for leasing in the given year 2014 or 2018, respectively. If history is a guide, the future availability of these deferred lands is anything but certain. It appears just as likely that future planning alternatives might deem these areas permanently off-limits for surface activities, or that future oil and gas lease sales will not encompass the entire planning area, and will simply offer portions of the NPR-A not included in these long-deferred lands. Thus, this amounts to a constructive deferral beyond the areas' expiration dates. We expect these deferred areas to be included in BLM's annual Call for Lease Area Nominations for NPR-A immediately after the deferral period ends.

[2.002] The State of Alaska continues to encourage BLM to incorporate a thorough assessment of potential pipeline corridors that would deliver Outer Continental Shelf (OCS) oil and gas resources through NPR-A and to market. **[2.003]** The DEIS must provide more specific provisions for onshore infrastructure to transport oil and gas to the Trans-Alaska Pipeline System (TAPS). Restrictive surface protection measures, Special Area designations, and stipulations must not prevent the transport of Chukchi oil and gas to market.

These are just a few examples where the Draft NPR-A IAP DEIS will discourage - not encourage accessing and developing abundant hydrocarbon reserves within the NPR-A, and restricts the ability of meeting President Obama's goal of reducing oil imports by one third by 2025. The State of Alaska fully endorses this goal- Governor Parnell also set a priority goal of increasing TAPS throughput to one million barrels of oil production per day within a decade. However, we must have a federal government that welcomes exploration and development by enforcing timely decision making and permitting within its authority to allow access to the NPR-A, as just one example where abundant hydrocarbon resources await critical exploration and development.

The U.S. Geological Survey estimates 896 million barrels of conventional, undiscovered oil and 53 trillion cubic feet of conventional, undiscovered non-associated gas within NPR-A and adjacent State waters. Developing these resources will help stimulate Alaska's economy as well as contribute to the nation's energy needs. The NPR-A IAP DEIS should be developed to allow oil and gas development within NPR-A, and should not be subject to unnecessary restrictions or deferrals.

As a cooperating agency on the NPR-A DEIS, we look forward to continue working with BLM and other cooperating agencies throughout the remainder of the NEPA process. We hope that the issues we have raised from scoping and throughout the development of the DEIS will not be disregarded, but incorporated into the Final EIS to help achieve the stated purpose of this EIS and to follow the statutory direction provided in the Naval Petroleum Reserves Production Act of 1976. The State has been a strong participant in past NPR-A planning processes and has a vested interest in an IAP that encompasses 23 million acres of the North Slope, addressing a wide variety of issues including oil and gas activities, wildlife, subsistence, access, and the potential for mineral development. The comments enclosed with this letter represent the consolidated views of the State's resource agencies.

Sincerely,

Daniel S. Sullivan
Commissioner

Enclosures

cc:
Randy Ruaro, Deputy Chief of Staff, Office of the Governor
Kip Knudson, Director of State & Federal Relations, Office of the Governor
Daniel Sullivan, Commissioner, Department of Natural Resources
Joseph Balash, Deputy Commissioner, Department of Natural Resources
Ed Fogels, Deputy Commissioner, Department of Natural Resources
Thomas Crafford, Director DNR, Office of Project Management and Permitting
Sara Longan, Large Project Manager, Office of Project Management and Permitting
William Barron, Director DNR, Division of Oil and Gas

NPR-A Integrated Activity Plan and Draft EIS
State of Alaska comments

I. Department of Natural Resources

A. ANILCA Program Comments

The State supports the overall intent of this planning process to provide further opportunities for oil and gas exploration and development in the National Petroleum Reserve - Alaska (referred to hereafter as NPR-A or the Reserve); however, we continue to have serious concerns about certain aspects of the plan. **[2.004]** The statement of purpose and need for the IAP/EIS includes determining the appropriate management of all Bureau of Land Management (BLM)-managed lands in the NPR-A "in a manner consistent with existing statutory direction," yet the plan selectively disregards Congressional direction provided under the Naval Petroleum

Reserves Production Act of 1976 (NPRPA or Production Act), as amended; the Alaska National Interest Lands Conservation Act (ANILCA); and the Federal Land Policy and Management Act of 1976 (FLPMA), and inappropriately applies administrative policy to the NPR-A, as follows:

1. BLM Instruction Memorandum 2011-154, which directs BLM to consider wilderness characteristics when making management decisions, does not apply to the NPR-A. While BLM may be required under Section 201 of FLPMA to "prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values;" the scope of land use planning in NPR-A was expressly limited by Congress and does not include protecting wilderness-related values and activities.

2. The "broad authority" claimed by BLM under FLPMA Section 302 is in fact expressly limited by section 302(a), which provides that "where a tract of ... public land has been dedicated to specific uses according to any other provision of law it shall be managed in accordance with such law." BLM's FLPMA section 302 authority also is expressly limited by the NPRPA, 42 U.S.C. § 6506a(a)&(b), and its implementing regulations, 43 C.F.R. § 2361.0-2, which provide that mitigation and other protective measures afforded under the Act are secondary to the primary purpose of the Reserve - the exploration and development of oil and gas resources.

3. The Wild and Scenic Rivers Act does not trump ANILCA's direction for Alaska, which expressly prohibits wild and scenic river reviews without further authorization from Congress. 16 U.S.C. § 1326(b).

Additional discussion of these significant issues and others are provided in the following general and page-specific comments.

Wilderness Management

[2.005] The State strongly disagrees with the assertion that the Salazar June 1, 2011 directive to consider wilderness values in management decisions applies to the NPR-A. The scope of land use planning in the Reserve is expressly limited by the Reserve's organic act. As the DEIS indicates, 42 U.S.C.A. § 6506a(c) states that FLPMA Sections 202 and 603 do not apply to the Reserve.

(c) Land use planning; BLM wilderness study

The provisions of section 202 and section 603 of the Federal Land Policy and Management Act of 1976 ...shall not be applicable to the Reserve.

The FLPMA Section 603 exemption makes it clear: there shall be no wilderness reviews or wilderness management in NPR-A. This is further confirmed by ANILCA, which specifically excluded the Reserve from the wilderness study area and interim management requirements of Sections 1001 and 1004. And both ANILCA Section 1320 and Secretarial Order 3310, as revised in the June 1, 2011 Salazar Memo, rely on FLPMA Section 202 authority, which as BLM acknowledges, does not apply in the Reserve. While FLPMA Section 201 gives BLM authority to inventory resource and other values, it is not within BLM's authority to implement land use planning direction from which the Reserve is specifically exempt.

Furthermore, section 302(a) of FLPMA specifically states that "where a tract of public land has been dedicated to specific uses according to any other provisions of law it shall be managed in accordance with such law," and not managed pursuant to the Secretary's authority under section 202 of FLPMA. Instead of being managed under FLPMA, the surface resources of the Reserve are to be managed under the Production Act. 42 U.S.C. § 6506a (b) Mitigation of adverse effects, states:

Activities undertaken pursuant to this Act shall include or provide for such conditions, restrictions, and prohibitions as the Secretary deems necessary or appropriate to mitigate reasonable foreseeable and significantly adverse effects on the surface resources of the National Petroleum Reserve in Alaska.

The Production Act specifically identifies the surface values that are to be considered and protected through the Reserve planning process as "environmental, fish and wildlife, and historical or scenic values," 42 U.S.C. §§ 6503(b), and "subsistence, recreational, fish and wildlife, or historical or scenic value," 42 U.S.C. § 6504(a).

The NPRPA implementing regulations further identify the specific surface resources afforded protection under the Act, consistent with the primary purpose of the Reserve. Wilderness character and values were not included. For example,

Implementing regulations at 43 CFR 2361.1 Protection of the environment, states:

The authorized officer shall take such action, including monitoring, as he deems necessary to mitigate or avoid unnecessary surface damage and to minimize ecological disturbance throughout the reserve to the extent consistent with the requirements of the Act for the exploration of the reserve. (43 CFR 2361.1(a), emphasis added)

Maximum protection measures shall be taken on all actions within the ... special areas, and any other special areas identified by the Secretary as having significant subsistence, recreational, fish and wildlife, or historical or scenic value .... (43 CFR 2361.1(c), emphasis added)

To the extent consistent with the requirements of the Act.... On proper notice as determined by the authorized officer, such actions may be taken to protect fish and wildlife breeding, nesting, spawning, lambing or calving activity, major migrations of fish and wildlife, and other environmental, scenic or historic values. (43 CFR 2361.1(e)(1), emphasis added)

The NPRPA initially directed the Secretary to establish a task force to "conduct a study to determine the values of, and best uses for, the land contained in the reserve," taking into consideration existing uses and values, including wilderness values; however, there was no direction to base future management decisions on protecting subjective wilderness values. Again, the NPRPA exemption of FLPMA Sections 202 and 603 makes it clear that the Reserve was not to be managed as multiple use lands, and that wilderness protection was not part of the mandate.

[2.006] The State also strongly objects to BLM's stated intentions to exercise its authority under Secretarial Order 3310, as amended by the June 1, 2011 Salazar Memo, to recommend designated wilderness independent of this planning effort (page 30, Section 2.4.1). As already noted, ANILCA Section 1320 does not apply to the NPR-A and ANILCA Section 1326(b) precludes BLM from recommending wilderness in the NPR-A without explicit Congressional authority:

No further studies of Federal lands in the State of Alaska for the single purpose of considering the establishment of a conservation system unit .... or for related or similar purposes shall be conducted unless authorized by this Act or further Act of Congress.[emphasis added]

Neither the NPRPA nor ANILCA can be superseded by an administrative action. It is inappropriate and misleading to the public to indicate otherwise. The DEIS discloses prior NPR-A planning decisions since 1983, which illustrate BLMs various positions on the issue (Chapter 3, Page 428, Section 3.4.8.2) but offers no legally defensible explanation for the apparent current position that designated wilderness is consistent with the primary purposes of the Reserve. Excerpts from prior NPR-A planning efforts cited in this plan include:

The BLM recognizes the Congressional intent of PL 96-514, which indicates that no "wilderness" designations will be made in the Reserve and the intent of PL 96-487. The BLM cannot reinterpret Congressional authority through administrative procedures. (1983 NPR-A FEIS) [emphasis added]

Because wilderness designation would not meet the purposes and objectives of this planning effort, BLM decided not to consider possible wilderness designation for the planning area in the IAP/EIS. (1998 NE NPR-AIAP/EIS)[emphasis added]

Because creating new wilderness designations is inconsistent with the management objective, alternatives proposing such an action [wilderness designation] are outside the scope of the Amended IAP/EIS and this Supplement thereto. (2008 NE NPR-A Final Supplemental IAP/EIS)[emphasis added]

Production Act Purpose

The introductory statement that the Secretary of Interior has "broad authority to regulate the use, occupancy, and development of public lands and to take whatever action is required to prevent unnecessary or undue degradation of the public lands" (1.5.1 Legislative Constraints, Page 5), in accordance with FLPMA Section 302, ignores the exception that applies to the NPR-A.

The Secretary shall manage the public lands under principles of multiple use and sustained yield, in accordance with the land use plans developed by him under section 202 of this Act when they are available, except that where a tract of such public land has been dedicated to specific uses according to any other provisions of law it shall be managed in accordance with such law. [emphasis added]

Section 302(b) also states:

In managing the public lands, the Secretary shall, subject to this Act and other applicable law and under such terms and conditions as are consistent with such law ....[emphasis added]

[2.007] The NPRPA established the primary purpose of the NPR-A, which is oil and gas exploration and development, and limits the scope of protective measures that can be applied in the Reserve. The Act and implementing regulations stipulate that protective measures, including for designated special areas, are limited "to the extent consistent with the requirements of the Act for the exploration of the reserve." (43 CFR 2361.1(a))

This is acknowledged in the DEIS where it states, in response to a scoping request to eliminate or reduce the size of the existing Special Areas:

Special Area designation does not itself impede oil and gas development. Special Areas, rather, indicate to managers and the public the importance of certain lands and the need to consider carefully the appropriate protection of surface resources consistent with oil and gas activities. (page 31, 2.4.4 Reduce or Eliminate Special Areas)[emphasis added]

Yet, while the DEIS includes such references and statements, it still claims the Reserve has "two major purposes" - oil and gas exploration and development and [emphasis added] resource protection (Chapter 1, Page 4, Section1.4, Issue #1), which is also reflected in the purpose and need statement (Chapter 1, Page 1, Section 1.1). In addition, DEIS Alternatives B and C place resource protection above exploration and development, including measures that inappropriately protect wilderness characteristics and values (including wilderness recreation opportunities - Chapter 2, page 21, Alt. C). This is clearly illustrated in the following descriptions of the plan alternatives from Chapter 2, Page 15, Section 2.1:

Alternative B describes a future management that emphasizes the protection of the surface resources of NPR-A with substantial increases in areas designated as Special Areas, designation of extensive areas that would be deferred from leasing around Teshekpuk Lake and in the southwestern part of the Reserve with important caribou habitat and important primitive recreation values, and recommendation for designation of 12 Wild and Scenic Rivers, while still offering opportunities for oil and gas leasing on nearly half of the Reserve.[emphasis added]

Alternative C provides for smaller additions to Special Areas than Alternative B, defers from leasing the most remote part of NPR-A that has the greatest potential for providing a primitive recreation experience, provides for leasing with extensive surface protection stipulations near Teshekpuk Lake, and recommends three rivers for designation as Wild and Scenic Rivers, while offering opportunity to lease oil and gas resources in more than three-quarters of the Reserve.[emphasis added]

Only Alternative D correctly describes the relationship between the primary purpose of the Reserve and protective measures.

Alternative D would allow the BLM to offer all of the NPR-A for oil and gas leasing, while protecting surface values with a collection of protection measures.[emphasis added] This chapter also describes alternatives considered but eliminated from detailed analysis and the reasons why these alternatives were eliminated from further consideration.

[2.008] We request the DEIS appropriately recognize the limits of FLPMA Section 302 as it applies to the NPR-A IAP, and consistently recognize in all aspects of the plan that protective measures, including designation of Special Areas, are secondary to the primary purpose of the Reserve, which is the exploration and development of oil and gas resources. **[2.009]** We offer the following simple edits to the excerpts noted above, which put the proposed actions into the proper context generally. However, this intent also needs to be incorporated into all affected areas of the plan.

Alternative B offers opportunities for oil and gas leasing on nearly half of the Reserve while ~~describes a future management that emphasized the~~ protecting ~~on of the~~ surface resources of NPR-A with substantial increases in areas designated as Special Areas, designation of extensive areas that would be deferred from leasing around Teshekpuk Lake and in the southwestern part of the Reserve with important caribou habitat and important primitive recreation values, and recommendation for designation of 12 Wild and Scenic Rivers~~, while still offering opportunities for oil and gas leasing on nearly half of the Reserve~~.

Alternative C offers opportunity to lease oil and gas resources in more than three-quarters of the Reserve while providing ~~es~~ for smaller additions to Special Areas than Alternative B, defers from leasing the most remote part of NPR-A that has the greatest potential for providing a primitive recreation experience, provides for leasing with extensive surface protection stipulations near Teshekpuk Lake, and recommends three rivers for designation as Wild and Scenic Rivers~~, while offering opportunity to lease oil and gas resources in more than three quarters of the Reserve~~.

Wild and Scenic River Review

The State reiterates its objection to BLM conducting a wild and scenic river review in NPR-A, and does not support recommendations for new wild and scenic rivers. **[2.010]** The DEIS cites the Wild and Scenic Rivers Act as its authority to conduct Wild and Scenic River Reviews and also states doing so is consistent with the settlement agreement reached between the Department of Interior and American Rivers in 1983, and with the plan's purpose and need "to protect surface resources" (Chapter 2, page 3). However, the discussion fails to also recognize other applicable federal laws that provide direction specific to the management of the NPR-A - the NPRPA and ANILCA.

ANILCA amended the Wild and Scenic River Act in Alaska by adding 26 rivers to the Wild and Scenic River System and directing the study of 12 additional rivers statewide, including three within the NPR-A. Specifically, ANILCA Section 604 (a) and (b) designated the Etivluk-Nigu, Utukok, and Colville rivers for study for potential inclusion in the wild and scenic rivers system, and decreed that the 1979 NPRPA 105(c) satisfied ANILCA's study requirements. The NPRPA 105(c) study recommendations were transmitted to Congress on April 12, 1979, and Congress never took action to designate the rivers pursuant to the Wild and Scenic Rivers Act.

Congress did not intend an endless cycle of wild and scenic river studies in Alaska. ANILCA defined wild and scenic rivers as conservation system units; therefore, all applicable provisions of ANILCA must be recognized, including the prohibition against further studies in Section 1326(b):

No further studies of Federal lands in the State of Alaska for the single purpose of considering the establishment of a conservation system unit, national recreation area, national conservation

area, or for related or similar purposes shall be conducted unless authorized by this Act or further Act of Congress.[emphasis added]

This intent is articulated in ANILCA's legislative history, which emphasized the importance of including Section 1326, which is provided below. It also shows that Congress clearly retained for itself the sole authority for future studies or reviews for the purpose of creating additional conservation system units in Alaska.

Title XII - Administrative Provisions

"No More"

The Committee bill contains two provisions which I think are absolutely necessary to reassert Congress' authorities in the matter of land designations: (1) the revocation of the monuments and the other FLPMA withdrawals which were made last year by the Administration to put pressure on the legislative process, and (2) the exemption of Alaska from the wilderness study provisions of FLPMA in the just belief that with passage of this bill "enough is enough".

However, one further critical provision is lacking. With the designation of over 100 million acres by this bill, coupled with the 50 million acres of units already existing in Alaska, nearly 40 percent of the land mass of the State would be within conservation systems. Surely that sufficiently meets even the most generous allocation of land for this specific purpose to the exclusion of most other land uses. Should this bill become law, we in Alaska must have some assurance that this represents a final settlement of the nation's conservation interests. We cannot continue to be exposed to the threats and intimidation of a zealous Executive which may feel in the future that the Congress did not meet the Administrations desires for land designations in Alaska.

Thus, absent from this bill is a provision barring further conservation system designations through administration action such as the Antiquities Act. Obviously, the Congress could act again in the future if it were so inclined, but the arbitrary permanent removal of federal lands from the public domain can no longer be left to the Executive in Alaska. Deletion of such a provision in this bill is a serious deficiency which must be corrected prior to any final action." (Senate Report No. 96- 413, pg. 446, Senator Gravel)[1]

A later version of the Alaska lands legislation, the so-called Tsongas Substitute for H.R. 39, was amended to include the language now found in ANILCA Section 1326. During the August 18, 1980 Senate floor debate on the Tsongas Substitute, Senator Stevens explained that the Alaska State Legislature had asked the Alaska delegation to address seven consensus points that were not originally contained in the bill:

"I have uniformly responded to questions in those areas [Alaska communities] concerning the revised Tsongas substitute. This substitute now is a version of the Senate Energy Committee bill, but it does not satisfy the seven points that our State legislature asked us to address in connections with this legislation.

I have told Alaskans that while I cannot vote for the Tsongas substitute, I think it has to be judged as being a compromise that is better than the existing situation under the national monuments and certainly better than those the President has indicated he will impose if a bill does not pass.

Our State legislature asked us to address seven points. We call them the consensus points .....

The fifth injunction of the legislature was to be sure that there is what we call a no-more provision. This was a provision I insisted on in 1978. It was in the so-called Huckaby bill. It was in the bill that almost was approved in 1978. That clause is not in the committee bill. It is in the revised Tsongas substitute because the agreement we had in committee that when the bill had reached its final version on the floor of the Senate, the committee would agree to the no more clause. Realizing that the Tsongas revised substitute may be final version, the Senator from

Massachusetts, at my request, has included that." (Congressional Record - Senate August 18, 1980, pg. S11047)

Senator Stevens later in the floor debate formally introduced Amendment No. 1967 to H.R. 39 for the following purpose:

"To provide congressional oversight for major modifications of areas established or expanded by this Act and to require congressional approval for future major executive withdrawals of certain public lands in Alaska."

The amendment containing the essential wording of Section 1326 was adopted and became part of the Tsongas substitute.[2] That bill was approved by the Senate on August 19, 1980 and by the House on November 12, 1980.

[2.011] The settlement reached between American Rivers and the Department of the Interior in 1993 applies to RMPs, but not to IAPs. The settlement agreement clearly states:

The Director, Bureau of Land Management (BLM) will rescind BLM Instruction Memorandum No. 91-127, which provided an exception for Alaska from the general BLM requirement to conduct wild and scenic river studies as part of the resource management plan (RMP) process. (Emphasis added)

The settlement also states:

BLM Manual, Part 8351.06F will be amended to delete the exemption for Alaska for conducting wild and scenic river studies as part of the RMP process

BLM Manual 8351 currently states, "The BLM evaluates identified river segments for their eligibility and suitability for WSR river designation through its RMP process. Activity planning shall not be used to accomplish such evaluations." (page 10, emphasis added) The DEIS clearly recognizes that because FLPMA Section 202 does not apply to the NPR-A, this Integrated Activity Plan is not an RMP:

Because of the exemption from FLPMA section 202, this plan is not being developed as a RMP." (Page 6, Emphasis added)

BLM cannot refer to this plan as an Integrated Activity Plan in name only and continue to follow guidance and process intended for an RMP.

Furthermore, Section 3.4.7 describes the cursory effort by BLM to assess outstandingly remarkable values (ORV) for rivers in the planning area to determine whether they meet the minimum wild and scenic river eligibility criteria of being free-flowing and having one ORV (Chapter 3, Page 422). BLM admittedly relied primarily on scoping comments to compile the list of eligible rivers in the plan, and further states "The planning team decided to take a permissive interpretation of the eligibility of rivers in the planning area." The section also justifies the ORVs identified by stating "It would be difficult to argue that any particular river in the south NPR-A did not possess outstanding remarkable values, given the unique and remote setting when evaluated in a national context and the near necessity for recreationists to use rivers to move through the area in summer." The USDI-USDA Final Revised Guidelines for Eligibility, Classification and Management of River Areas (FR 39458) and the Interagency Wild and Scenic Rivers coordinating Council's technical report "The Wild and Scenic River Study Process" provides explicit guidance for identifying and recommending rivers to Congress for potential designation into the Wild and Scenic River System. Based on the discussion in this section, it appears BLM has not followed the established process; therefore, aside from it being contrary to law, the wild and scenic river study is also wholly insufficient.

Applicable law curbs wild and scenic river reviews in NPR-A in part because additional wild and scenic river designations in the Reserve would seriously interfere with the ability to allocate water resources for on-shore development. Most oil and gas development occurs in the winter, which requires water for ice roads, ice pads, and other functions. Diversion in some rivers would

also be necessary to create reservoirs from summer high flow periods to supply the water necessary for winter operation. Fettering those resources with wild and scenic river designations would hinder the ability to permit water use for ice roads, exploratory drilling, and future development. Such a result would be inconsistent with the primary purpose for which the Reserve was designated.

The plan also indicates that rivers found "suitable" for recommendation will be managed to protect free-flow, water quality, and identified ORVs "During consideration by Congress ..." Given that the study is legally unsupported and technically insufficient, this is nothing more than a blatant attempt to administratively establish protective status for rivers in the planning area, which subverts Congressional authority to protect selected rivers, and ignores Congressional direction in ANILCA and the NPRPA, which prevents such abuse.

The Production Act provides sufficient measures for the Secretary to provide administrative protection for river-related resource values in the Reserve, consistent with the requirements and primary purpose of the Act. As discussed above, the Production Act and implementing regulations allow for mitigation measures, including recommendations for special areas, with the proper caveats that appropriately recognize the primary purpose of the Reserve. **[2.012]** In addition, similar to previous statements about wilderness, the 2008 Final Supplemental IAP/EIS for the NPR-A concluded that wild and scenic river designation was inconsistent with the management objectives of the NPR-A (Section 1.2). And similarly, the DEIS does not provide a reasonable explanation for the change in position, nor legally defensible justification for conducting the review.

ANILCA Section 810 Analysis

The State supports providing the public with opportunities to learn about and comment on proposed federal actions that could affect the various resources, uses, and activities that are integral to the lifestyles and livelihoods of Alaskans and visitors. ANILCA requires such public comment opportunities, including the notice and hearing requirements in Section 810.

[2.013] We are concerned, however, with the cursory analysis and determination that Alternative D will significantly affect subsistence resources and uses on the general basis that, compared to the other alternatives, more of the Reserve will be available for oil and gas exploration and development, and less will be "protected."

This plan, including Alternative D, proposes monitoring, stipulations, required operating procedures/best management practices, and additional protections that apply in biologically sensitive areas. Consistent with the Production Act implementing regulations at 43 CFR 2361.1, BLM is required to "mitigate or avoid unnecessary surface damage and to minimize ecological disturbance. " Without more specific information, we question the determination that Alternative D will significantly affect subsistence resources and caution against potential rejection of Alternative D based solely on this overly-generalized analysis.

Page-Specific Comments

[2.014] Page 5, Section 1.5.1, Legislative Constraints: To improve clarity, we recommend this section address legislation affecting the NPR-A IAP in chronological order.

[2.015] Page 13, Section 1.10, last paragraph, last sentence: Regarding the criteria for panel recommendations, we recommend also indicating the process must be consistent with ANILCA Section 810(a).

[2.016] Page 20, Section 2.3.2 Alternative B, 3rd paragraph: Many provisions of ANILCA allow non-subsistence permanent infrastructure on conservation system units (CSUs) in Alaska, including, for some provisions, designated wilderness (e.g., Title XI - transportation and utility systems, cabins, air and water navigation aids, communication sites, and facilities for weather, climate and fisheries research). A blanket prohibition of such facilities would make these areas in the NPR-A more restrictively managed than CSUs, including designated wilderness. We believe this is inappropriate in the Reserve and inconsistent with Congressional intent in the

Production Act. In addition, this discussion refers to an allowance for "temporary" access and provides examples of modes of access, which is confusing. We recommend removing the "temporary" qualifier.

[2.017] Page 22, Section 2.3.3, Alternative C, last paragraph: This section notes that land near Teshekpuk Lake would allow oil and gas leasing but preclude production pads. This action may require horizontal drilling to reach oil and gas resources. It is unclear how drilling and production pads would be acceptable in Alternatives B and D. Since Alternative B is more focused on surface resource protection, we would assume leasing and horizontal drilling would be acceptable unless the expansion of the Teshekpuk Lake Special Area eliminates nearby lease tracts. Further, it is unclear whether construction of production pads or leases in closer proximity to oil reserves at Teshekpuk Lake be allowed in Alternative D, where maximizing lease opportunities is the goal. It would be helpful to provide more detail on the anticipated lease and construction authorizations near Teshekpuk Lake to help differentiate proposed actions in Alternative C.

[2.018] Page 30, Section 2.4.1 and Page 136, Section 3.2.5.1: We request these sections clarify that the hardrock and coal mining withdrawal was subject to valid existing rights and limited ANCSA-related exceptions.

[2.019] Page 30, Section 2.4.1, Recommending Wilderness Designation by Congress: The current policy of the Secretary of the Interior, which is referenced in this section only allows for local constituencies and agencies to make wilderness recommendations that have bipartisan congressional support (6/10/11 Salazar to Congress). While not maintaining our objection as explained in the above general comment, when referencing the current policy, the following additional language should be included. The BLM may identify and/ or make recommendations regarding possible areas appropriate for Wilderness designation independent of this planning effort that have local, state, and congressional support. (Emphasis added.)

[2.020] Page 360, Section 3.4.3.1 Federal Subsistence Management: The State of Alaska retains management authority over fish and wildlife on federal public lands unless specifically preempted by federal law. The State also provides subsistence opportunities for all Alaska residents. The Federal Subsistence Management Program regulates subsistence uses of fish and wildlife, including harvest, on federal lands and certain waters with a federal reserved water right and provides a priority opportunity for qualified rural residents. These federal regulations, at times, supersede State harvest regulations. Therefore, we request removal of the phrase "subsistence hunting in the planning area is ruled by Title VIII of [ANILCA]" as the State of Alaska provides subsistence opportunities throughout the NPR-A.

Furthermore, the federal subsistence priority is a priority opportunity and does not guarantee harvest. Additionally, Section 804 is clear that this priority opportunity applies in two specific circumstances, protection of the continued viability of a fish or wildlife population and the continuation of subsistence uses. Therefore, we request the following modifications to the second sentence in the second paragraph for clarity.

Federal law, therefore, grants rural subsistence users a priority consumptive opportunity over others [sic] user's (such as commercial or recreational use) only when it is necessary to restrict the taking of fish or wildlife in order to protect the viability of such populations or to continue subsistence uses.

[2.021] Page 423, Section 3.4.8.1, Applicable Laws: We question the inclusion of the Wilderness Act. Consistent with the discussion under ANILCA in this section, the Act has no current application in the NPR-A. We request the section be removed.

[2.022] Page 310, Section 4.3.17 Wild and Scenic Rivers: We question how the no action alternative can carry forward the wild and scenic river review and assign outstanding remarkable values to 12 streams. The no action alternative is supposed to describe the current situation and assumes the continuation of current management practices.

[2.023] Page 310, Section 4.3.17 Wild and Scenic Rivers, first paragraph: See previous comments regarding wild and scenic river recommendations. While maintaining our objection to the wild and scenic river recommendation process, it is unclear how the same river can be found suitable in one alternative and not suitable in another. What criteria is BLM using to determine suitability? Without the supporting documentation that applies to the rivers found suitable for recommendation, this section is incomplete.

[2.024] Page 318, 4.3.19 Visual Resources, Table 4-21: Visual resource management class 1 is not applicable to the NPR-A. As stated in the plan, class 1 applies to "generally designated wilderness, wilderness study areas ... or wild sections of Wild and Scenic Rivers," none of which exist in the NPR-A.

[2.025] Page 265, 4.7.7.18 Wilderness Characteristics, Past and Present Effects and Their Accumulation, 1st paragraph, 1st sentence: The following two statements indicate activities occurring off BLM- managed lands would not affect the NPR-A.

Past and present activities outside of villages and Umiat, which are not on BLM managed lands, have not negated the wilderness characteristics of naturalness, outstanding opportunities for solitude or primitive and unconfined recreation on the NPR-A lands. (page 265)

By the year 2100 villages within the reserve may have an increase in population and infrastructure (see section 4.7.1.2). Since the increase would be contained within the village it would not alter the wilderness characteristics of the BLM-managed lands within the reserve. (page 267)

Following this same logic, we disagree with the following statement in the plan regarding development outside of NPR-A near Umiat and request it be removed or revised consistent with the above statements.

There could be increased air traffic at Umiat, which would result in a reduction in solitude and primitive recreation experience for recreation users in the reserve.

Division of Oil and Gas Comments

General comments

The exploration, development, production, and transportation of oil and gas resources are primary purposes of the NPR-A. Access, temporary exploration, and permanent development and pipeline facilities can be successfully constructed concurrently with other multiple beneficial land uses. The Division of Oil and Gas strongly supports the approval and construction of essential transportation corridors, and associated road and pipeline routes within the Reserve, including within special areas.

The limited discussion in the IAP/EIS of a future corridor for [oil and gas] infrastructure is referenced in all Alternatives. This potential land use should be maintained in the preferred Alternative.

"While this plan makes no decision regarding a corridor for infrastructure associated with offshore development, such a corridor could be accomplished in this alternative, subject to appropriate conditions developed through a NEPA process." (Vol 1 , Chapter 2, Page 19; 21; 22).

The IAP/EIS must address optimizing and improving pipeline integrity. Permanent roads can be a critical component of a pipeline integrity program by making inspections, maintenance, and repairs less costly, easier, and less dependent upon weather conditions. Surface transport provides reliable access for emergencies and under a variety of weather conditions. Roadless pipeline systems will require aerial access and monitoring that can be weather dependent.

DEFERRALS:

Deferred lands timeframes

The Division of Oil and Gas opposes the creation of deferral areas for oil and gas leasing with indeterminate durations. Sunset dates for the deferrals should be explicitly stated in all alternatives. Deferral area expiration should only be extended beyond current sunset dates to the extent necessary to acquire needed information about an area that will inform appropriate development restrictions, and not be used to remove area from consideration for oil and gas leasing without an identified end date or condition to be met.

North Teshekpuk and Kasegaluk Lagoon deferrals

The IAP/EIS says that lands in these deferral areas will become available for leasing in the given year (2014 or 2018). If history is a guide, the future availability of these deferred lands is anything but certain. It appears just as likely that future planning alternatives might deem these areas permanently off-limits for surface activities, or that future oil and gas lease sales will not encompass the entire planning area, and will simply offer portions of the NPR-A not included in these long deferred lands. Thus, this amounts to a constructive deferral beyond the areas expiration date. We expect these deferred areas to be included in BLM's annual Call for Lease Area Nominations for NPR-A immediately after the deferral period ends, provided the necessary information required to formulate appropriate development restrictions as discussed elsewhere in these comments has been obtained.

Deferral graphics on Alternatives maps

The 2004 NPR-A EIS decisions deferred 1.6 million acres in the Kasegaluk Lagoon area from leases sales through 2014, and 425,000 acres north and east of Teshekpuk Lake have been consistently unavailable in lease sales and are currently deferred until 2018. All deferrals should be mapped accurately on each alternative map, with explicit graphical representation and legends (2-1T, 2-2, 2-3, 2-3T, 2-4, and 2-4T).

MITIGATION MEASURES

IAP/EIS Alternatives, proposed mitigations: Lease stipulations, and required operating procedures/best management practices, (Vol 1, Table 2-3, Page 36-120)

A beneficial management plan can maximize multiple land and water uses. Mitigation measures and land use restrictions to reduce negative impacts should be decided on a case-by-case basis.

"Facility Design and Construction" (E-11.a, Page 58)

Surveys shall be conducted by the lessee for at least 3 years before authorization of construction, if such construction is within the USFWS North Slope eider survey and at least 1 year outside that area.

This three year survey duration may cause activities to be delayed and prevent implementation prior to the expiration of the oil and gas lease(s). The Division of Oil and Gas does not encourage delays caused by long-term studies within the U.S. Fish and Wildlife Service North Slope eider survey area that can unnecessarily delay oil and gas activities.

SUPPLEMENTAL MITIGATION MEASURES

"Additional Protections that Apply in Select Biologically Sensitive Areas": K-1 through K-12. (Volume 1, Chapter 2, Table 2-3, Page 72-98).

[2.026] We were unable to locate a definition of a biologically sensitive area in the IAP/EIS. It is unclear how these areas are established, under which authority they were created, and why they are necessary.

River set-back distances

E-2 Lease Stipulation area should be used as guidance, with exceptions allowed for projects on a case-by-case basis.

Examples of proposed protection set-back distances include, but are not limited to:

[2.027] K-3a: The proposed lease stipulations/best management practices are arbitrarily-applied and limit access for resource development. The stipulations should be approved on a project-by-project basis for the area surrounding Teshekpuk Lake within 0.25 mile of the ordinary high watermark, and for oil and gas facilities in the area greater than 0.25 mile, including pipelines and related access roads for facility inspection and maintenance (Vol 1, Chapter 2, Page 78).

[2.028] K-11: Provisions should be made to allow for more than 300 acres permanent surface disturbance per lease tract. This can be accomplished by enlarging the outside boundary to include several lease tracts into one unit. A centralized accumulation of acreage should be allowed proportional with the total acreage within the unit. This could still meet the allowable footprint percentage size requirement for the unit. This would allow for centralized construction of development and production facilities, instead of forcing stranded isolated facilities to be built on a footprint that meets a statistical predetermined percentage of a single lease tract (Volume 1, Chapter 2, Page 94).

PETROLEUM RESOURCES
Petroleum Hydrocarbon Potential:

Several Alternatives (A, B, C) propose to prevent or restrict oil and gas leasing in areas where there is petroleum hydrocarbon potential. The area north and east of Teshekpuk Lake occupies a near-crestal position along the regional Barrow Arch structural trend, and has significant potential for the discovery of oil bearing reservoirs It is often noted that all the currently producing oil and gas fields on the North Slope lie within about 30 miles of the Beaufort Sea shoreline. This is because the crest of the Barrow Arch lies relatively close to the shoreline, and is the most important structural feature controlling the migration and accumulation of oil and gas. Potential reservoirs in that area have not been buried as deeply, nor witnessed as much structural uplift and erosion as equivalent age strata farther south, and therefore are expected maintain higher reservoir quality. For the same reason, source rocks are at a lower degree of thermal maturity in the area northeast of Teshekpuk Lake, favoring the possibility of oil rather than gas accumulations. The Moraine/Nuna interval in the Torok Formation at the Oooguruk production unit is a good example of how reservoirs that suffer from compaction-related degradation and gas-dominated hydrocarbon charge further to the south are now being successfully tapped for oil near the crest of the Barrow Arch just to the east of NPR-A.

The Utukok River region has barely been explored and has significant potential for gas resources. In conflict with this, Alternatives B and C create large areas along NPR-A's southwest boundary with increased land use protections or lease unavailability and the resultant reduced potential for oil and gas activities. These Alternatives expand the Utukok River Uplands Special Area and explicitly assign it and the western Colville River Special Area as unavailable for oil and gas leasing. However, USGS resources assessment publications identify numerous undrilled, unexplored, and prospective resource structures in the southwestern NPR-A foothills region. We request increased consideration of the impacts to oil and gas development on the proposed action.

Unconventional Petroleum Reservoirs:

[2.029] The State questions why the IAP/DEIS does not anticipate any unconventional oil and gas development in NPR-A (volume 2, Chapter 4, Page 49). BLM has provided a potentially incomplete analysis and projection of unconventional reservoirs in NPR-A. The State is concerned that BLM limits its consideration of unconventional oil and gas resources only to source-rock reservoirs. The IAP/DEIS addresses some important issues on source rock plays, but it has completely ignored the potential in tight sandstone plays. Exploration has established widespread occurrences of oil and gas shows in Beaufortian and Brookian sandstones that lack sufficient porosity and permeability to produce as "conventional" reservoirs.

In addition, the four plays eliminated from consideration as conventional plays due to recent drilling results were shifted by USGS to unconventional tight gas sandstone plays, as stated in Volume 2, Chapter 4, Page 57, paragraph 2. This elimination is apparently based upon the assumption that no development of these plays is anticipated, as described above. The IAP/EIS overlooks this petroleum resource potential, and the only unconventional plays discussed in the IAP/DEIS are source-rock plays. The BLM's analysis should include, and document, the planning for the potential development of hydrocarbons from the "unconventional" sandstone reservoirs, as well.

Development of discovered oil near Umiat:

[2.030] The IAP/DEIS text (volume 2, Chapter 4, Page 55, paragraph 2) states commercial gas is not likely to be developed at Umiat. Estimates of gas in the Umiat structure are very small; however, the Gubik gas field nearby has been estimated to contain 600 BCF recoverable. Renaissance, the leaseholder at Umiat prior to assigning its interest to Linc Energy, has published an Oil and Gas Journal article in which it identified cold gas injection as the preferred mechanism for pressure maintenance in producing oil from the Umiat field. Gubik gas field is the likely source of this gas. This information should be updated in the text.

SPECIAL AREAS

Colville River Special Area

[2.031] The K-7 lease stipulations would apply in all Alternatives other than D. This would place restrictions on facility placements due to concern over raptor nest sites, especially Arctic peregrine falcons. Given that Arctic peregrines and other raptors in the region have not been listed as threatened or endangered since the mid-1990s and are very abundant in the region now, consideration should be given to a substantial evaluation of the continued need for the proposed raptor nest protection buffer or if it should be reduced or deleted in all the alternatives.

Peard Bay Special Area

[2.032] Alternatives B and C would designate new special area lands in Northwest NPR-A, despite providing little or no information demonstrating that the expansion of the Peard Bay marine habitat areas while benefit the species listed for protection during agency and NEPA public reviews that were previously conducted for lease sales since the early 1980s. Alternative C limits the Special Area designation to Peard Bay itself, but Alternative B would extend the Special Area boundary to include approximately 1.5 million onshore acres, extending it more than 45 miles inland.

We request some justification for inland boundary expansion of the Peard Bay Special Area. It appears to expand well beyond what is needed for marine habitats. We are concerned that these land designations might set the stage for more restrictive management policies in the future, and might hamper future oil and gas leasing in the areas and pipeline construction that may be needed to transport hydrocarbons from the Chukchi Sea and NPR-A lands eastward to the Trans-Alaska Pipeline System (TAPS).

MISCELLANEOUS COMMENT

Assumptions regarding "Effects on Public Health"

[2.033] The text for Alternative A makes the assertion that there is a direct negative relationship between increased employment and economic growth, and negative health impacts. The FEIS states:

"The health risks associated with economic growth and in-migration, namely increased use and access to alcohol and drugs and the spread of infectious disease and sexually transmitted diseases will be commensurate with the level of employment, road access, and the degree to which outside workers fraternize with local populations." (Volume 1, Chapter2, Table 2-3, Page 119-120).

It is not credible to assume that all the effects of oil and gas resources development on public health and economics would be negative impacts.

In contrast, a publication by the Institute of Social and Economic Research (ISER), Anchorage, reports that the residents of the North Slope have chosen to combine subsistence and wage employment activities (Kruse, J., ISER 1991). Based upon this information, the presence of oil and gas development and employment cannot be substantiated to be the primary direct source of negative health impacts and changes in health of North Slope residents, as stated in Table 2-3 of the FEIS.

There are public health benefits that have accompanied the overall increase in the standard of living due to oil development that created an enormous property tax base in the North Slope Borough, Alaska. Increased tax revenues and personal incomes are responsible for many public health improvements, including access to better education, good clinics and hospitals, public sanitation, heated homes, and greater affordability of healthy food choices. To assume that North Slope residents would not responsibly and successfully adapt to earning more income through employment betrays a predetermined perspective of the inability of residents to adapt and maintain healthy lifestyles.

II. Alaska Department of Fish and Game (ADF&G)

Caribou

ADF&G supports protective measures for caribou calving areas, insect relief areas, and movement corridors around Teshekpuk Lake as supported by Stipulations K-5, K-9, and K-10. Recent calving survival studies indicate calf survival within areas encompassed by the K-5 Teshekpuk Lake Caribou Habitat Area, the K-10 Southern Caribou Calving Area, and the no leasing area of Alternative B that encompasses the Teshekpuk Lake Special Area is higher than that for calves born outside of these three areas. The areas outlined in Alternative B do encompass much of the calving activity observed both historically and recently. As such, this area represents a valid area for placement of caribou related stipulations with respect to calving and insect relief.

The Utukok River Uplands Special Area was established in 1977 because of its importance to the Western Arctic Caribou Herd (WAH). The calving area of the WAH occurs within the Utukok River Uplands Special Area. The WAH is used as an important subsistence resource for approximately 40 communities in the Northwest Arctic and North Slope boroughs. Protective measures, many of which are present in Lease Stipulation K-12, should be adopted to ensure continued use of caribou habitat, particularly calving and insect relief habitat, within the Utukok River Uplands Special Area.

Geese

The Teshekpuk Lake Special Area (TLSA) was designated primarily to conserve important nesting, staging, and molting habitat for a large number of waterfowl. Conservation of this area for geese is of greater consequence than any other waterfowl habitat issue on the North Slope. The goose molting area of Teshekpuk Lake Special Area is most critical for Pacific black brant. On average, this region supports up to 30 percent of the entire population for several months; it has been a long-term historical molting area for brant from all breeding grounds including the Yukon-Kuskokwim Delta (75 percent of Teshekpuk molters), North Slope, Canada, and Russia. The area is also the primary molting site for the North Slope segment of mid-continent greater white-fronted geese (MCWFG). The presence of MCWFG in the TLSA has grown from less than 5,000 birds in the 1980s to an average of over 20,000 in the past 10 years; the 2002 count of 35,000 geese approached 6 percent of the continental population.

Given the importance of goose molting traditions in this area and the vital behavioral and nutritional requirements provided by unique habitats, it is critical that stipulations be adopted to minimize impacts to these important habitats. The crucial impediments to compatible development within the goose molting area of the TLSA are the extremely limited extent of sites

suitable for roads and facilities and the levels of disturbance that can be expected from even the best oilfield management practices currently in use. Lease stipulation K-4a contains provisions that may reduce some of the projected impacts to molting geese.

[Preamble 2.034, 035, 036] ADF&G recommends BLM adopt the conditions originally set forth in the State's 1998 comments for the NE NPR-A IAP/EIS and reiterated in our August 23, 2004 comments on the draft Amended NE NPR-A IAP/EIS, in our February 25, 2005 comments on the final Amended NE NPR-A IAP/EIS, and again in our June 23, 2008 comments on the NE NPR-A Final Supplemental IAP/EIS for inclusion into the Record of Decision. These comments requested:

[2.034] A. Make leasing available in the Goose Molting Area with the caveat that no permanent oil and gas facilities are allowed until the consultations described below are conducted:

1. Goose disturbance studies, designed and implemented by a joint State, federal, NSB, and industry research and monitoring team are conducted.

2. A consultation [collaboration] process focusing on designing and using appropriate technologies to avoid impacts to molting geese is developed and the results of this process successfully implemented in conjunction with an NPR-A exploration and development planning process.

3. The Federal Aviation Administration (FAA) and BLM, in consultation with ADF&G and the U.S. Fish and Wildlife Service (USFWS), develop and implement appropriate helicopter planning and routing restrictions for this area to prevent disturbance during the critical goose molting period.

[2.035] B. Establish a three mile wide corridor along the south and west shores of Teshekpuk Lake and along the coast from Cape Halkett south to the Kogru River where no permanent oil and gas facilities would be allowed unless it can be demonstrated to the satisfaction of the BLM State Director in collaboration with State resource agencies, that proposed oil and gas activities will not negatively impact wildlife resources; and

[2.036] C. Work with lessees and resource agencies to develop strategies and alternatives for shared infrastructure such as pipelines and processing facilities in order to maximize operation efficiency while minimizing potential impacts to surface resources.

In addition, we recommended in 2005 additional modification to some of the measures recommended by the state and adopted by BLM. These included:

[2.037] A. Expand the Caribou Movement Corridor the entire width of the corridor between Teshekpuk Lake and the Kogru River or to a distance of six miles, retaining a pipeline corridor along the eastern margin of the Caribou Movement Corridor.

[2.038] B. Expand the Southern Caribou Calving Area to include all of T13N, R2-5W, and the northern half of T12N, R2-5W). Expand the caribou calving area to include the core calving areas north, south, and east of Teshekpuk Lake with the application of NSO [No Surface Occupancy] (with no exceptions), including roads and pipelines, but allowing a limited area for a pipeline along the eastern side of the calving area to allow access to the area north of Teshekpuk Lake.

[2.039] C. Northwestern caribou migration corridor. We recommend continuation of NSO under 1998 ROD [Record of Decision] and expansion of the NSO to the northeast, with counsel from State resource agencies regarding the extent of the expansion.

[2.040] D. Reasonable protection of subsistence use, users, and resources within NPR-A focusing on stipulation and ROP [Required Operating Procedures] performance over time through a locally accepted, independent monitoring, assessment and evaluation program of key subsistence protection provisions. A rigorous subsistence stipulation and ROP monitoring,

assessment and evaluation program, coupled with baseline studies, should yield information that can be used to protect these surface resources.

The Kasegaluk Lagoon Special Area is a highly productive shallow coastal lagoon and barrier island system spanning 125 miles of the Chukchi Sea coast. Approximately 40 miles of the lagoon are within the NPRA, between Icy Cape and Wainwright. The area provides important habitat nesting, staging, waterbirds during spring and fall migration. Kasegaluk Lagoon serves as migration staging and feeding area for as many as half of the Pacific brant population which uses Kasegaluk Lagoon during fall migration (Johnson 1993). Brant use the northeastern section of Kasegaluk Lagoon in mid-August through early September for feeding prior to or during their southward migration. This area also serves as a staging area for much of the king eider breeding population (Oppel et al. 2009); supports a nesting colony of about 500 Common eiders (USFWS 2008); and provides molting habitat for male long-tailed ducks. Steller's eiders may also stage in the area during spring and fall migration.

In addition, Kasegaluk Lagoon and associated barrier islands provide haulouts for spotted seal and walrus. Significant numbers of spotted seals use the spits and shoals of Kasegaluk Lagoon and Avak Inlet from July through October (Frost et al. 1993). It is estimated 1,000 to 3,000 seals use the area. In recent years with reduced sea ice presence in the Chukchi Sea, hundreds to thousands of walrus have hauled out on Kasegaluk Lagoon barrier islands in late August through October. Beluga whales also are present from late June to late July, with an estimated 2,000 to 3,500 animals traveling through the area.

Because of the presence of significant concentrations of biological resources in Kasegaluk Lagoon, notably brant and waterbirds, beluga whales, spotted seals, important subsistence harvest areas, as well as its low oil potential, ADF&G recommends that if the area is made available for leasing, the State continue to recommend the area be available for oil and gas leasing but under the condition that no permanent surface facilities be allowed in Kasegaluk Lagoon Special Area.

References cited:

Frost, K.J., L.F. Lowry, and G. Carroll. 1993. Beluga whale and spotted seal use of a coastal lagoon system in the Northeastern Chukchi Sea. Arctic 46(1):8-16.

Johnson, S.R. 1993. An early-autumn staging area for Pacific Flyway Brant (Branta bernicla): Kasegaluk Lagoon, Chukchi Sea, Alaska. Journal of Field Ornithology 64:539-548.

USFWS. 2008. Beringian seabird colony catalog. Microsoft Excel spreadsheet. Anchorage, AK.

Oppel, S., D.L. Dickson, and A.N. Powell. 2009. International importance of the eastern Chukchi Sea as a staging area for migrating King Eiders. Polar Biology 32:775-783.

[1] While the legislative history of ANILCA is extensive, given the number of bills introduced by both the House and Senate, Senate Report 96-413 from the Senate Committee on Energy and Natural Resources is acknowledged as one of 2 committee reports that constitute the most relevant legislative history for the Act. It was cited at the end of the original slip law under Legislative History.

[2] Subsection 1324(a) of Amendment 1967 is identical to the language found in Section 1326(a), however subsection (b) of the amendment was more inclusive than the final language of Section 1326(b): and read "No further studies of Federal lands for the single purpose of considering the establishment of a conservation system unit, special management area, national recreation area, national conservation area, or for related or similar purposes shall be conducted unless authorized by this Act or further Act of Congress."

NPR-A DEIS Alaska Department of Fish and Game Comments [comments presented in table, see pdf file for original format]

Chapter 2/Section 2.1.2 Page 17
Within Section 2.1.2, the draft states "It was designated in 1977 because of its critical importance for the Western Arctic herd of caribou, which was then in decline, but today is the largest herd on the North Slope." The WAH has declined to a revised 2009 population of 348,000 caribou. This said, the Department believes this herd is managed sustainably and is not at risk.

Chapter 3/Section 3.4.3 Page 358
In the first paragraph, reference is made to the link between subsistence foods and food security. See Brown, C.L., J.S. Madganz, D.S. Koster, and N.M. Braem, editors. 2012. Subsistence harvests in 8 communities in the central Kuskokwim River drainage, 2009. Alaska Department of Fish and Game, Division of Subsistence, Technical paper No. 365. Fairbanks, Alaska for findings on food security in rural Alaska communities that take into account subsistence and store bought foods.

Chapter 3/Section 3.4.3 page 359
States "About 87 percent of the North Slope Borough and 91 percent of Northwest Arctic Borough residents are satisfied with the fish and game that is available in their region." Is the citation Poppel et al. 2007?

Chapter 3/Section 3.4.3 page 359
The 4th paragraph, (discussing of sharing), overlooks barter and trade as part of distribution of wild foods. See Madganz, J.S. C.J. Utermohle, and R.J. Wolfe. The production and distribution of wild food in Wales and Deering, Alaska, 2002. Alaska Department of Fish and Game, Division of Subsistence, Technical paper No. 259. Fairbanks, Alaska, and other within the technical paper series for findings on social network analysis of subsistence foods.

[2.041] Chapter 3/Section 3.4.3 Page 359
The 5th paragraph refers to the 2000 Subsistence update, with Arctic area harvest of ~ 10,507,255 pounds, 516 pounds per person per year. This information has been updated and changed slightly. Update available online at
http://www.adfg.alaska.gov/static/home/library/pdfs/subsistence/subsistence overview2010.pdf

[2.042] Chapter 3/Section 3.4.3 Page 359
5th paragraph: Cites Poppel, that 57% of Barrow and Kotzebue and over 70% in smaller communities depend on subsistence foods for half or more of their diet. Check tables in Poppel: these values are for proportion of meat and fish consumed that is traditional food, not proportion of total diet.

Chapter 3/Section 3.4.3.3 Page 366
"Terrestrial mammals comprise up to 95 percent of harvest. (Citation?)

Chapter 3/Section 3.4.3.3 Page 367
1st paragraph: "Periodic shortages ... " gives the impression that Anaktuvuk Pass residents still follow migrating caribou year-round.

[2.043] Chapter 3/Section 3.4.3.3 Page 369
Refers to harvest caribou data collected by ADF&G, cited as Pedersen 2006. That data has since been revised and published in Technical Paper 361. See Braem, N.M. S. Pedersen, J. Simon, D.S. Koster, T. Kaleak, P. leavitt, J. Patkotak, and P. Neakok. 2011. Monitoring of caribou harvests in the National Petroleum Reserve in Alaska: Atqasuk, Barrow and Nuiqsut, 2003-2007. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 361, Fairbanks.

[2.044] Chapter 3/Section 3.4.3.3 Page 375
Refers to harvest caribou data collected by ADF&G, cited as Pedersen 2006. That data has since been revised and published in Technical Paper 361. See Braem, N.M. S. Pedersen, J. Simon, D.S. Koster, T. Kaleak, P. Leavitt, J. Patkotak, and P. Neakok. 2011. Monitoring of caribou harvests in the National Petroleum Reserve in Alaska: Atqasuk, Barrow and Nuiqsut, 2003-2007. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 361,

Fairbanks. NOTE: Data collected in Barrow between 2003-2007 is believed to have resulted in overestimates of harvest. See TP 361.

Chapter 3/Section 3.4.3.3 Page 376-378
More recently published information on Barrow subsistence use areas (contemporary ones) published in MMS OCS Study Number 2009-003, Subsistence Mapping of Nuiqsut, Kaktovik and Barrow. 2010. Stephen Braund & Associates, Anchorage, AK 99510

[2.045] Chapter 3/Section 3.4.3.3 Page 382
Refers to harvest caribou data collected by ADF&G, cited as Pedersen 2006. That data has since been revised and published in Technical Paper 361. See Braem, N.M. S. Pedersen, J. Simon, D.S. Koster, T. Kaleak, P. Leavitt, J. Patkotak, and P. Neakok. 2011. Monitoring of caribou harvests in the National Petroleum Reserve in Alaska: Atqasuk, Barrow and Nuiqsut, 2003-2007. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 361, Fairbanks.

[2.046] Chapter 3/Section 3.4.3.3 Page 383-386
More recently published information on Nuiqsut subsistence use areas (contemporary ones) published in MMS OCS Study Number 2009-003, Subsistence Mapping of Nuiqsut, Kaktovik and Barrow. 2010. Stephen Braund & Associates, Anchorage, AK 99510

[2.047] Chapter 3/Section 3.4.3.3 Page 395
States WAH population estimate is 401,000. The WAH has declined to a revised 2009 population of 348,000 caribou. This said, the Department believes this herd is managed sustainably and is not at risk.

Chapter 3/Section 3.4.3.3 Page 395
States "it is estimated that at least 43 rural communities rely on the Western Arctic Caribou Herd as their primary terrestrial meat source. Far fewer than 43 rely on it as their primary terrestrial meat source. Wales, contained in the list on p. 395, only rarely takes caribou, for example. The role of caribou in the nutritional, cultural, and economic health of northwestern Alaskan communities varies. In some communities, caribou meat is a large portion of the total subsistence harvest each year. In communities where other resources are more abundant, caribou may represent a smaller portion of the total subsistence harvest. Because of a village's location, residents may have only occasional access to the WACH. In villages located along key migration routes, residents might take caribou during several months of the year.

[2.048] Chapter 3/Section 3.4.3.3 Page 396
The list of communities that utilize and *depend* on WACH caribou should be revised to reflect that several communities on the list only rarely harvest caribou from the WAH. Or change the language from "utilize and depend."

[2.049] Chapter 3 Page 449
Refers to outmigration from North Slope between 2000-2007, suggesting that findings in Martin et al. identify rapid increases in home heating and other energy prices as a causal factor in NSB outmigration. The study did not find this, see pages 8 and 9, and does not refer to NSB outmigration specifically (refers to rural Alaska). Barrow has natural gas for heat. The North Slope Borough subsidizes heating fuel in 5 NSB communities, while it is unclear how long this subsidy has been in place. Suggest a rewrite of this paragraph.

Chapter 3/Section 3.4.11.1 Page 449
Refers to high costs of living in North Slope villages. Suggest incorporating existing data from the University of Alaska Cooperative Extension Service Food Cost Surveys.

[2.050] Chapter 5/Appendix A2.2 Page 14
In the bulleted items describing how Alternative B differs from Alternative A, mention should be made to the expansion of the Utukok River Upland Special Area under Alternative B that would include more of the WACH range (calving area, insect relief), therefore providing greater

protective measures to the WACH. This would reduce the risk of direct and indirect impacts to subsistence harvests of Unit 26, 22 and 23 communities.

Chapter 5/Appendix A2.4.1 Page 22
With regard to the subsection "Caribou": Alternatives which provide greater protective measures for calving areas of the TCH and WACH will have less effect on caribou, and hence, subsistence harvest of caribou.

[2.051] Chapter 5/Appendix A2.5.1 and any discussion of cumulative effects Page 25
With regard to cumulative effects, those resulting from oil/gas activity within NPRA (listed in bullet form on page 23) should be considered as part of a larger suite of proposed development activities within the range of the Western Arctic Caribou herd. These include a transportation corridor (pipeline and/or roads) that would transport Chukchi Sea oil/gas to the TAPS, a road to the Ambler Mining district from the Dalton Highway, and proposed road through the Yukon connecting to the Council Road (and Nome). When looking at cumulative impacts it is also important to closely examine how cumulative impacts associated with resource development have affected other North Slope caribou herds. Information is available to show that potentially impacted caribou herds can co-exist despite cumulative resource development if responsible conservation stipulations are adopted.

[2.052] Vol 4. Appendix B Page 35
Fish Habitat Permits are issued by the Alaska Department of Fish and Game under Alaska Statutes AS 16.05.841 and AS 16.05.871.

National Petroleum Reserve-Alaska Preliminary Draft IAP/EIS Review Comments
June 12, 2012

Organization: Alaska Department of Environmental Conservation [comments presented in table, see pdf file for original format]

Chapter 3 Page 125 Section 3.2.2 Air Quality
Comment:
Subsection 3.2.2.1 regarding attainment status notes that NPR-A is in an area that is in attainment of current National Ambient Air Quality Standards (NAAQS) and the Alaska Ambient Air Quality Standards AAAQS.
Suggestion:
While North Slope air quality data have not shown violations of the National Ambient Air Quality Standards (NAAQS) near the facilities, questions have arisen about the ability of air quality models to predict deposition of pollutants, given the North Slope's strong atmospheric stability and complex high latitude atmospheric chemistry. The Department believes that setting up an air quality monitoring network would be a valuable tool for establishing an existing baseline for NPR-A air quality and to ground truth and check the accuracy / sensitivity of air modeling in the Arctic. The lack of existing data and potential for future development make it important that the Bureau of land Management take steps in the current EIS process to develop better baseline air quality information to help guide any future development.

Chapter 3 Page 125 Section 3.2.2
Comment:
Subsection 3.2.2.1 regarding attainment status notes that the State of Alaska is in the process of updated air quality regulations at 18 AAC 50 to include the 24-hour standard for fine particulate matter. This process is still ongoing

[2.053] Chapter 3 Page 463 Section 3.4.11.5 Paragraph 4
Comment:
This paragraph notes that the Alaska Department of Environmental Conservation administers the funds and grants under the National Petroleum Reserve-Alaska Impact Mitigation Program (19 AAC 50). This is incorrect.
Suggestion:

The Alaska Department of Commerce Community and Economic Development is the correct department to cite. The proper regulation citation is found at 3 AAC 150. This change of regulation citation occurred in 1999.

[2.054] Chapter 4 Page 19 Paragraph 2
Comment:
This paragraph notes that "No new gravel pads are anticipated to be constructed for exploration. {They would likely be prohibited under all the action alternatives}. It is not clear why this conclusion was made or under what authority.
Suggestion:
Just because seasonal ice pads have been used in past in the NPR-A, it appears that this policy would create a seasonal restriction on drilling exploration wells in the NPR-A. The Alaska Oil and Gas Conservation Commission and the Alaska Department of Environmental Conservation has the authority to impose restriction on exploration well drilling.

[2.055] Chapter 4 Page 49 Paragraph 4
Comment:
The word exits does not make sense in the sentence that ends " .... where geologists believe that the source rock that yielded the oil of Prudhoe Bay and the other large conventional oil fields exits."
Suggestion:
It appears the proper word is "exists".

[2.056] Chapter 4 Page 113 Paragraph 3
Comment:
This paragraph notes that "Exploration drilling under Alternative A is not expected to have a measurable effect on water quality since spills will occur in the winter and will likely occur on ice pads." This approach is too simplistic.
Suggestion:
The sentences should state that these winter spills pose a lesser risk to the environment due to oil spills soaking into the snow. This can allow for easier cleanup than bare tundra, but the risk still exists for oil to be released to the environment during spring break up.

[2.057] Chapter 4 Page 336 Paragraph 2
Comment:
This paragraph notes that "substantial health effects may accrue at even levels below NAAQS standards" It is not clear what this statement is trying to imply.
Suggestion:
The sentence should include a statement that the agency regulations reflect standards that are protective of human health. The existing statement appears to imply that the agency regulations are not protective of human health.

[2.058] Chapter 4 Page 337 Paragraph 4-5
Comment:
Paragraphs 4-5 are not related to Noise- related Health Effects, which is where they are currently found.
Suggestion:
These two paragraphs should be moved to the section discussing Air Quality Effects at the top of page 336.

[2.059] Chapter 4 Page 338 Paragraph 1-2
Comment:
Paragraphs 1-2 are not related to Noise- related Health Effects, which is where they are currently found.
Suggestion:
These two paragraphs should be moved to the section discussing Air Quality Effects at the top of page 336.

[2.060] Chapter 4 Page 341
Comment:
Figure 4-25 is a diagram with linkages to acculturative stress from oil and gas development activities. The top linkage "lack of connection to land/traditional land use" is directly linked to Strength of traditional culture. This link does not make sense.
Suggestion:
The linkages need a better explanation. The linkage to Increased ability to hunt appears to lead to an increase in Strength of traditional culture, but the lack of connection to land/traditional land use appears to work in the opposite direction. Perhaps arrows would be appropriate to signify direction.

[2.061] Chapter 4 Page 364 Paragraph 1
Comment:
The final sentence in this paragraph states "These protective measures will ensure that any release of drilling muds or oil from blowouts will not enter adjacent water bodies." This statement is misleading.
Suggestion:
The sentence should be re-written to reflect the fact that the protective measures will decrease the risk of drilling muds or oil from entering adjacent water bodies.

[2.062] Chapter 4 Page 65
Comment:
Table 4-40, footnote 5 cites a BOEM reference in preparation by Anderson to justify an increase in the spill rate per billion barrels produced. The citation should be to a published reference that is available for review.
Suggestion:
Since the spill rate is a measure of risk that must be mitigated, the spill rate used in the table needs to be justified. The cited reference should be provided to the cooperating agencies for review and could be included in an appendix for public review. The references cited in the final EIS should only be those generally available for review, not documents in preparation.

[2.063] Chapter 4 Page 67 Section 4.7.5.3
Comment:
Section 4.7.5.3 Wetlands and Floodplains paragraph cites a Memorandum of Agreement between the EPA and the Army Corp of Engineers. This agreement may have been superseded by a joint rulemaking in 2008 and further guidance from the Corp of Engineers Alaska District in 2009.
Suggestion:
Determine if the MOA between the EPA and Corp of Engineers is still current. If not revise this paragraph.

[2.064] Chapter 4 Page 89 Paragraph 4
Comment:
The paragraph titled Marine Waters states that "mechanical recovery, the method allowed by current regulations, is not efficient and only removes a fraction of the spilled oil, especially in broken ice." This statement implies that mechanical recovery is inappropriate for spill response.
Suggestion:
This statement should explain that Alaska spill response regulations at 18 AAC 75 recognize the limitations of mechanical recovery methods and accounts for that by requiring the responsible party to control and capture a realistic planning standard volume within a 72 hour time frame. This means that the responsible party is required to provide whatever assets are need to clean up the volume of oil expected, no matter what the efficiency rate of the equipment might be.

[2.065] Chapter 4 Page 262 Paragraph 3
Comment:
This paragraph implies that a decrease in funding for recreational facilities on state land could

result in a decrease in recreational activity on state land. It then proposes that this could lead to an increase in recreational activity on NPR-A lands. This defies logic, since the following statement confirms that there are no recreational facilities on NPR-A lands. It would follow logically that any recreational facilities still provided on state lands would be more attractive than no facilities.
Suggestion:
The entire paragraph should be deleted.

Chapter 4 Page 283 Final Paragraph
Comment:
The last sentence notes in part "hunters report that they need to travel farther to reach subsistence resources due to both a displacement of animals and to avoidance of industrialized areas." The end of the sentence is grammatically cumbersome.
Suggestion:
Either delete the word "to" before the word avoidance or change the wording to "a displacement of animals and to avoid industrialized areas."

[2.066] Chapter 4 Page 284 Paragraph 3
Comment:
This paragraph states that a road to Umiat would introduce the potential for competition and conflicts between outsiders and hunters from Anaktuvuk Pass. This statement needs to be amended.
Suggestion:
The word "would" needs to be changed to "could" since one of the alternatives being discussed in the EIS for a road to Umiat involves a road that connects with the Spine Road and not directly to the Dalton Highway, so public use would not be a given. Other controls on public access or limitation on recreational hunting and fishing should be addressed.

Chapter 4 Page 329 Section 4.11.4.17
Comment:
This subsection is titled "Wild and Scenic Rivers" but the text described generically what would happen to rivers in the event of a very large oil spill (VLOS). If a VLOS has the potential to impact a Wild and Scenic River within NPR-A that should be described with direct reference to the river in question.
Suggestion:
Remove the words "Wild and Scenic" from the subsection title.

[2.067] Appendix B Page 35
Comment:
The listing of permits and approval actions by the Alaska Dept. of Environmental Conservation bullet nine notes that the department will receive authorization for EPA to issue NPDES permits by May 2013. This date is incorrect.
Suggestion:
The date should be changed to October 2012.

[Response to 2.001]
A discussion of BLM's legislative authority and responsibilities are located in section 1.5. The BLM maintains that the plan appropriately fulfills these responsibilities.

[Response to 2.002]
The impact analysis in the Final IAP/EIS provides suitable specificity of analysis. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure. The current plan makes no decisions on such infrastructure, except to prohibit it in specified areas of particularly high value surface resources under some alternatives.

[Response to 2.003]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope.

However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. It properly describes the development that may be associated with such infrastructure in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development" and appropriate analysis of associated cumulative impacts is provided in Chapter 4, in the section titled "Cumulative Effects on the Environment."

[Response to 2.004]
Section 2.4.1 of the IAP/EIS, "Alternatives Considered but Eliminated from Detailed Analysis," addresses these issues.

The BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort, although BLM did analyze alternatives that would protect a broad range of areas of land with such wilderness characteristics as required by NEPA and FLPMA. The BLM is not precluded from making recommendations regarding designation of Wilderness within the planning area.

While the 1981 Appropriations Act exempted NPR-A from FLPMA Section 603, ANILCA Section 1320 grants the Secretary authority to "identify areas in Alaska which he determines are suitable as wilderness."

Section 5(d)(1) of the Wild and Scenic Rivers Act provides: "In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials." Also, the NPRPA does not exempt NPR-A from the Wild and Scenic Rivers Act, and Section 1326(b) of ANILCA does not apply because the IAP/EIS is not a single-purpose study as described therein. Thus, BLM properly reviewed Wild and Scenic River eligibility in this planning effort.

[Response to 2.005]
Section 2.4.1 of the IAP/EIS, "Alternatives Considered but Eliminated from Detailed Analysis," addresses this issue. The BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort, although the BLM did analyze alternatives that would protect a broad range and areas of land with such wilderness characteristics. The BLM is not precluded from making recommendations regarding designation of Wilderness within the planning area.

Congress provided the exemption from FLPMA Section 603's wilderness study requirements because NPR-A's wilderness values had already been studied in the late 1970s as directed by Section 105(c) of the NPRPA. In so doing, Congress did not preclude future wilderness reviews or protection of wilderness values. Consistent with this understanding, ANILCA Section 1320

grants the Secretary authority to "identify areas in Alaska which he determines are suitable as wilderness."

[Response to 2.006]
Section 2.4.1 of the IAP/EIS, "Alternatives Considered but Eliminated from Detailed Analysis," addresses this issue. The BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort, although BLM did analyze alternatives that would protect a broad range and areas of land with wilderness characteristics. Independent of this planning effort, BLM is not precluded from identifying and/or making recommendations regarding designation of Wilderness within the planning area.

[Response to 2.007]
A discussion of BLM's legislative authority and responsibilities are located at section 1.5. The BLM maintains that the plan appropriately fulfills these responsibilities.

[Response to 2.008]
A discussion of BLM's legislative authority and responsibilities are located at section 1.5. The BLM maintains that the plan appropriately fulfills these responsibilities.

[Response to 2.009]
The text at section 2.1 has been edited as requested.

[Response to 2.010]
The BLM discusses and recognizes all federal laws applicable to the NPR-A. See, for example, Section 1.5, "Legislative Constraints and Planning Criteria."

[Response to 2.011]
BLM explains its authority and mandate for considering W&SR in section 1.4.

The BLM manual has been updated to clarify the fact that Wild and Scenic River suitability evaluations are not limited to Resource Management Plans. "The BLM will prepare a detailed study report for all rivers congressionally authorized for study and for all other rivers identified by the BLM as potential additions to the National System through its public planning process. The BLM may employ a variety of planning approaches, including a land use plan or programmatic plan amendment, depending on timing and available information and resources." (MS 6400 4., BLM, 2012)

[Response to 2.012]
The BLM explains its authority and mandate for considering Wild and Scenic Rivers in section 1.4.

The commenter apparently believes that it is an inconsistency to fail to reconsider in detail stream segments determined to be nonsuitable for Wild and Scenic River designation through the most recent IAP for the Northwest and Northeast NPR-A. However, the IAP did consider these rivers and determined detailed review of the earlier IAP decisions on suitability is not warranted. On the other hand, those eligible rivers in the southern NPR-A where there has not been a IAP were given more detailed consideration. This complies with BLM Manual Guidance on this subject (MS-6400 4.1.A, BLM, 2012).

[Response to 2.013]
Alternative D would make 100 percent of the NPR-A available for leasing. The review of Alternative D must consider impacts to larger areas, to more ecologically sensitive areas, and from lower levels of surface protections. The review of Alternative D is cursory only in that it summarizes, in lieu of repeating, the findings of all the resource analyses done for Alternative D. The plan does include protective measures and the BLM is required to mitigate or avoid ecological disturbance. Protective measures can effectively mitigate most, but not all, impacts of development. The text states that "if the optimistic levels of development predicted for Alternative D occur, the amount of disturbance to subsistence NPR-A-wide would be significant." Subsistence users avoid infrastructure and, if 100 percent of the NPR-A were

leased, the resultant amount of projected infrastructure would significantly impact subsistence even if populations levels remained stable and migration routes were not disturbed.

[Response to 2.014]
FLPMA and the NPRPA were both enacted in 1976. Although the NPRPA preceded FLPMA by several months, given that an important amendment to the NPRPA relevant to the plan was passed in 1980, it is appropriate to discuss that legislation after FLPMA. Regardless of the order, the discussion is clear.

[Response to 2.015]
The Subsistence Advisory Panel (SAP) was not created pursuant to ANILCA. The Panel has responsibilities that are greater than those required by ANILCA. This is a mitigation negotiated with North Slope communities during the first IAP for the Northeast NPR-A in 1998. The SAP continues because of the important contribution in making management recommendations to the Authorized Officer on ways to minimize impacts to subsistence use and users.

[Response to 2.016]
The provisions described for the Draft IAP/EIS's Alternative B (Alternative B-1 in the Final IAP/EIS) and in the preferred alternative (Alternative B-2) in the Final IAP/EIS are consistent with the BLM's authority under the NPRPA. The preferred alternative, however, has provided for exceptions for some of the cited facilities.

[Response to 2.017]
The maps describing the range of alternatives provide clarity on what lands would be available for leasing--all lands not indicated as unavailable, would be available--and the range of facilities that would be allowed and under what conditions. For further clarification on the latter, consult the K series of stipulations and required operating procedures and best management practices.

[Response to 2.018]
The statements in the IAP/EIS are correct. Sec. 102 of the NPRPA withdrew lands in the NPR-A from the mining and mineral leasing laws. It provided the Secretary of the Interior separate limited authority for disposal of mineral materials.

[Response to 2.019]
Section 2.4.1 of the IAP/EIS - Alternatives Considered but Eliminated from Detailed Analysis - addresses this issue. BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort. Addition of "that have local, state, and congressional support" is inappropriate. The Secretary's letter to members of Congress on June 10, 2011 referred to pending legislation with "strong local, state, tribal, and congressional support," but in no way limited his prerogative to recommend other lands for designation. Indeed, the following sentence in the Secretary's letter indicated that he may also recommend lands for designation "that the Department of the Interior believes have widespread support and are worthy of Wilderness designation."

[Response to 2.020]
The text has been edited to address this comment.

[Response to 2.021]
Section 2.4.1 of the IAP/EIS - Alternatives Considered but Eliminated from Detailed Analysis - addresses this issue. The BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort. The BLM is not precluded from making recommendations regarding designation of Wilderness within the planning area. While the 1981 Appropriations Act exempted NPR-A from FLPMA Section 603, ANILCA Section 1320 grants the Secretary authority to "identify areas in Alaska which he determines are suitable as wilderness."

[Response to 2.022]
Under the existing situation these rivers have been determined to be eligible for addition to the national wild and scenic rivers system. One of the purposes of this plan is to make suitability

determinations for the eligible rivers lacking current suitability determinations. Existing management prescriptions for rivers in this state (i.e. eligible without a suitability determination) are found in the BLM Manual (MS-6400, BLM 2012).

[Response to 2.023]
The criteria used for suitability determinations are enumerated in the Wild and Scenic Rivers Act and enumerated in section 3.4.7. Suitability is a judgment based on overall consideration of these criteria. Alternatives are developed to provide a description of a range of decisions the Secretary might make regarding suitability.

[Response to 2.024]
Alternative A is the current management status which was determined in the 2004 Northwest NPR-A IAP Record of Decision and the 2008 Northeast NPR-A Supplemental IAP Record of Decision. The former determined that land along a segment of the Colville River would be managed as VRM I. VRM I classifications are not limited to lands designated as Wilderness, Wilderness Study Areas, or Wild segments of Wild and Scenic Rivers. Under Alternative B-1 and C the lands along the rivers proposed for Wild and Scenic River designation VRM class I.

[Response to 2.025]
While past and present activities at Umiat have not affected wilderness characteristics, these activities have not included development. If development brings more air traffic there could be a corresponding reduction in solitude and primitive recreation.

[Response to 2.026]
For a discussion of these sensitive areas, see section 2.1.

[Response to 2.027]
Stipulations provide protections that the BLM considers important for surface resources. See section 2.3.5 for a discussion of the BLM's ability to grant a waiver, exception, or modification of a stipulation through the project permitting process.

[Response to 2.028]
According to regulations (43 CFR 3130.4-2) lease tracts in NPR-A may not exceed 60,000 acres. The tracts describe in stipulation K-11 range between approximately 46,100 and 57,100 acres.

[Response to 2.029]
The U.S. Geological Survey (USGS) recognizes a gradation in reservoir quality between what most people call conventional and unconventional resources. The classification of "conventional" and "unconventional" are based more on completion practices to achieve production than on the characteristics of the accumulations. Therefore, the USGS uses the words "conventional" and "continuous" because this stresses the continuous nature of accumulations in the latter.

The 2010 USGS "Updated Assessment of Undiscovered Oil and Gas Resources of the NPR-A" included conventional, undiscovered accumulations (including tight sand reservoirs) but did not include continuous resources. The assessment included discrete accumulations in both the Brookian and Beaufortian stratigraphic plays. The USGS acknowledged the generally low porosity and permeability (P&P), which were reflected in the volumetric parameters used in the assessment - the lower end of the P&P distribution would need to be fracture stimulated to flow. The USGS used Kokoda as the prime example of low P&P accumulation and considered it oil-saturated based on UV core photos, analysis of well logs, etc. The reduction in assessed resources relative to the 2002 assessment reflects mostly the reservoir quality information.

[Response to 2.030]
The IAP/EIS contains the information suggested by commenter in the discussion of "Development of Discovered Oil near Umiat" in section 4.2.1.2.

[Response to 2.031]
Stipulation K-7 is considered prudent management for the protection of raptors. The objective of the stipulation is to protect foraging habitat for raptors, not just Arctic peregrine falcons.

[Response to 2.032]
The resources to be protected by the boundaries of the Peard Bay Special Area are described in sections 2.3.2 and 2.3.3. Note that the preferred alternative adopts the smaller of the two areas considered for this new Special Area.

[Response to 2.033]
The BLM agrees that there are important public health benefits that have accompanied oil and gas development, that communities have shown a resilience to adapt, that wage employment combined with subsistence can provide a health benefit, and that the disease burden arises from a complex combination of factors. This is acknowledged in several parts of the IAP/EIS, including the public health discussions in the Affected Environment chapter (Chapter 3) and discussions of direct, indirect, and cumulative impacts in Chapter 4. Language has been added to the summary table to refer directly to health benefits associated with income and employment.

[Response to 2.034]
The suggestion described in this comment is within the range of alternatives considered in the IAP/EIS. A separate NEPA analysis would be required prior to permitting any development in the NPR-A, and it would include extensive studies and consultations.

[Response to 2.035]
The suggestion described in this comment is within the range of alternatives considered in the IAP/EIS.

[Response to 2.036]
This suggestion is within the existing range of alternatives. Best management practice E-5 requires minimization of the development footprint and requires consideration, among other steps, of "sharing facilities with existing development." A project specific NEPA analysis would be required for any development in NPR-A and would be conducted by multiple agencies. Alternatives of a project specific NEPA analysis would necessarily examine these potential means for reducing impacts to surface resources.

[Response to 2.037]
Stipulation K-9 spans the distance between Teshekpuk Lake and Kogru River and would allow for a pipeline corridor.

[Response to 2.038]
The protections suggested in the comment are within the range of alternatives considered in the IAP/EIS.

[Response to 2.039]
The protections suggested in the comment are within the range of alternatives considered in the IAP/EIS.

[Response to 2.040]
The protections suggested in the comment are within the range of alternatives considered in the IAP/EIS. The IAP/EIS would continue the Subsistence Advisory Panel and provide for a wide range of monitoring.

[Response to 2.041]
The text has been edited to include updated information from the 2010 Alaska Department of Fish and Game Subsistence Update.

[Response to 2.042]
The text has been corrected.

[Response to 2.043]
The text has been edited with the updated data.

[Response to 2.044]
The text has been edited with the updated data.

[Response to 2.045]
The text has been edited with the updated data.

[Response to 2.046]
The text has been edited to include references to the document.

[Response to 2.047]
In 2011, the WAH was estimated at 325,000. This information is updated in the Final IAP/EIS.

[Response to 2.048]
The text has been edited with less definitive language.

[Response to 2.049]
The text has been edited accordingly.

[Response to 2.050]
Although the Utukok River Uplands Special Area (URUSA) is expanded under Alternative B, this does not provide greater protective measures to the Western Arctic Caribou Herd than does Alternative A. Because there has never been a planning effort done for the southern NPR-A, the entire southern NPR-A (an area larger than the expanded URUSA in Alternative B) is unavailable for leasing under Alternative A.

[Response to 2.051]
A pipeline to transport Chukchi sea oil/gas to the Trans-Alaska Pipeline System (TAPS) or a gas pipeline in the vicinity of TAPS are considered in the Cumulative Impacts sections. Impacts from a potential Ambler mining district access route are considered in the Terrestrial Mammals section and the text has been edited to include a discussion of it in the Cumulative Effects section on Subsistence (Section 4.7.7.13: Subsistence: Future Effects and Their Accumulation: Oil and Gas Exploration and Development Activities: Proposed Road to Access the Ambler Mining District). The road to Nome is not far enough along in the planning stages to be considered at this point.

[Response to 2.052]
Appendix B has been modified to reflect the Alaska Statutes cited in the comment.

[Response to 2.053]
The citation has been corrected.

[Response to 2.054]
Stipulation D-2 for Alternatives B through E as well as for the Northeast NPR-A discussion of Alternative A states: "Construction of permanent or gravel oil and gas facilities shall be prohibited for exploratory drilling. Use of a previously constructed road or pad may be permitted if it is environmentally preferred." The language of Alternative A referring to the Northwest NPR-A planning area is only modestly more flexible, stating: "Exploratory drilling shall be limited to temporary facilities such as ice pads, ice roads, ice airstrips, temporary platforms, etc., unless the lessee demonstrates that construction of permanent facilities such as gravel airstrips, storage pads, and connecting roads is environmentally preferable or necessary to carry out exploration more economically." However, even if it is not prohibited by the alternatives, the BLM does not anticipate that new gravel construction would occur to support exploration because of the expense and scarcity of gravel particularly for such a speculative use, the past history of use of ice pads for exploration in NPR-A, and the unlikelihood that the responsible permitting agencies would permit such construction.

[Response to 2.055]
The text has been edited.

[Response to 2.056]
The text has been modified to address this concern.

[Response to 2.057]
The paragraph referred to begins with the sentence "Both EPA and the State of Alaska have established legal limits for air pollution based on scientific evidence, known as Ambient Air Quality Standards (NAAQS), to protect public health." This demonstrates that the agency standards are designed to protect human health. However, it is also accurate to state that health effects may accrue below these levels. For some substances such as carcinogens, there is no threshold level of exposure that is deemed completely safe. At a population level, there is an increase in the risk of adverse health effects at any level of exposure, even below the legal limits that have been established.

[Response to 2.058]
The text has been edited to clarify that these paragraphs do not refer to noise-related health effects.

[Response to 2.059]
Text changes have been made in the Final IAP/EIS.

[Response to 2.060]
The diagram has been altered in the Final IAP/EIS to make the direction of effect more clear.

[Response to 2.061]
This passage and similar ones for other alternatives have been modified.

[Response to 2.062]
Following review and revision, USDOI, BOEM and BSEE have published Anderson, C.M., M. Mayes, and R. LaBelle 2012. Update of Occurrence Rates for Offshore Oil Spills. OCS Report BOEM 2012-0069. Herndon, VA: USDOI, BOEM. 87 pp. The citation references in the Final IAP/EIS have been updated and the citation is included in the bibliography.
The publication is available on the Internet:[1]

[Response to 2.063]
The section has been updated.

[Response to 2.064]
The text has been modified to address this concern. The fate and behavior of spilled oil is discussed in section 4.2.2.1 and state regulations are addressed in section 4.2.2.4.

[Response to 2.065]
The paragraph has been deleted in the Final IAP/EIS.

[Response to 2.066]
The text has been modified as suggested.

[Response to 2.067]
This text has been changed.

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[1] http://www.boem.gov/uploadedFiles/BOEM/Environmental_Stewardship/Environmental_Assessment/Oil_Spill_Modeling/AndersonMayesLabelle2012.pdf

COMMUNICATION NUMBER 3
Stan Leaphart, Executive Director
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CITIZENS' ADVISORY COMMISSION
ON FEDERAL AREAS

June 15, 2012

Mr. Bud Cribley

Alaska State Director
Bureau of Land Management
NPR-A IAPIEIS Comments
AECOM Project Office
1835 Bragaw Street, Suite 490
Anchorage, AK 99508

Dear Mr. Cribley:

The Citizens' Advisory Commission on Federal Areas has reviewed the Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve-Alaska (NPR-A). We offer the following comments for consideration in developing and implementing a final IAP/EIS.

The Commission supports the general purpose and intent of this planning effort to determine the appropriate management of federal lands and subsurface resources within the NPR-A. However, we strongly object to the manner in which BLM has alternately followed and ignored key provisions in an extensive list of statutes, regulations, policies and manuals, in some instances omitting relevant information. The result is a draft plan that more closely resembles a management plan for a conservation system unit or similarly designated area than one which meets Congressional direction for the management of the NPR-A.

Wild and Scenic River Reviews

[3.001] The Commission opposes the inclusion of eligibility and suitability determinations for rivers within the planning area for the purpose of recommending their designation as wild and scenic rivers. Inclusion of these determinations is inconsistent with the provisions of the Alaska National Interest Lands Conservation Act (ANILCA).

[3.002] We object to the BLM conducting studies or reviews for the purpose of developing recommendations for additional wild and scenic river designations because of the clear provisions of ANILCA Section I 326(b) which states:

"No further studies of Federal lands in the State of Alaska for the single purpose of considering the establishment of a conservation system unit, national recreation area, national conservation area, or for related or similar purposes shall be conducted unless authorized by this Act or further Act of Congress."

By definition, a wild and scenic river is a conservation system unit and any study of rivers within the NPR-A for possible designation is a violation of Section 1326(b). We are aware that

federal agencies, including the BLM, frequently circumvent this prohibition on further studies by including them as part of various plans and revisions such as the current planning effort for the NPR-A draft IAPIEIS. We are pleased to note that the BLM at least acknowledges Section 1326 of ANILCA in the draft (Vol. I, Section 3.4.8.1, pg. 427) even after choosing to ignore it. Nevertheless, any wild and scenic river review violates both the letter and the intent of this section of ANILCA and should not be included in the final IAP/EIS.

In preparing comments on a draft management plan released by another Department of the Interior agency which also decided to ignore the clear directive in Section 1326(b) and elsewhere in ANILCA, Commission staff compiled the following legislative history. Our purpose was to help the agency understand that the so called "no more" clauses were not included in the statute by accident or as an afterthought, but were a deliberate action taken after considerable thought and debate.

We are providing this rather lengthy, and what may be considered by some as unnecessary, look at the legislative history of Section 1326 to emphasize its importance in securing the final passage of the legislation. The "no more clause" was a key piece in the final bill and critical to its passage. By 1980, virtually every acre of federal land and every rivers had been under study or analysis for nearly 10 years. Federal agencies and the Joint Federal-State Land Use Planning Commission had published voluminous reports and environmental impact statements contain recommendations for new parks, refuges, wilderness areas and wild and scenic rivers. Agencies and the public were exhausted with the process. Had Section 1326 and other compromise provisions not been included in a final bill, it is likely that passage of Alaska lands legislation would have been delayed well into the next Congress and new administration.

We also provide this history as proof that Congress clearly retained for itself the sole authority for future studies or reviews for the purpose of creating additional conservation system units in Alaska. And finally, we provide it to simply point out that "no more" actually means "no more."

It is unfortunate that we must remind the Department of the Interior and its agencies, including the BLM, of their responsibility to comply with ANILCA rather than attempting to find ever more creative ways to circumvent its provisions. We object to DOI agencies' continual efforts to thwart the clear intent of Congress by adopting policies and planning strategies based on expansive interpretations of their statutory authorities while ignoring statutory restrictions. This statement in the plan is a prime example of those policies and strategies: "The planning team decided to take a permissive interpretation of the eligibility of rivers in the unplanned area." (draft IAP/EIS, Vol. I Section 3.4.7.2, pg. 424).

ANILCA "No-More Clause"

ANILCA Section 10 I (d) provides the general declaration that Congress believed no further legislation designating new conservation system units, national recreation areas or conservation areas was necessary because ANILCA struck a proper balance between protection of the national interest in the public lands in Alaska and the future economic and social needs of the State of Alaska and its citizens.

Congress provided confirmation of this by taking additional steps in Section 1326 to limit the power of the Executive Branch to use its authority to upset that balance. Section 1326 provides clear and unambiguous restrictions on federal land management agencies with respect to future withdrawals and further studies or reviews. We quote this section here in its entirety:

Sec. 1326 (a) No further executive branch action which withdraws more than jive thousand acres, in the aggregate, of public lands within the State of Alaska shall be effective except by compliance with this subsection. To the extent authorized by existing law, the President or the Secretary may withdraw public lands in the State of Alaska exceeding five thousand acres in the aggregate, which withdrawal shall not become effective until notice is provided in the Federal Register and to both Houses of Congress. Such withdrawal shall terminate unless

Congress passes a joint resolution of approval within one year after notice of such withdrawal has been submitted to Congress.

(b) No further studies of the Federal lands in the State of Alaska for the single purpose of considering the establishment of a conservation system unit, national recreation area, national conservation area, or for related or similar purposes shall be conducted unless authorized by this Act or further Act of Congress" (emphasis added)

Inclusion of this section was not unintentional, nor was it done without considerable effort. At least one early version of the "D-2" legislation contained language curbing the authority of the executive branch. However, most of the bills introduced during the time of the "D-2" deliberations did not address this issue. Following the December 1978 Presidential Proclamations designating 17 national monuments under the Antiquities Act of 1906, the Alaska delegation and other members of Congress noted this deficiency and moved to correct it. At the invitation of Senator Henry Jackson, chairman of the Senate Committee on Energy and Natural Resources, Alaska Senator Mike Gravel submitted a letter to the committee expressing his views on H.R. 39, the bill which is the foundation for the final ANILCA. One section of Senator Gravel's letter addressed the "no more" issue directly:

Title XIJ - Administrative Provisions

"No More"

The Committee bill contains two provisions which I think are absolutely necessary to reassert Congress' authorities in the matter of land designations: (1) the revocation of the monuments and the other FLPMA withdrawals which were made last year by the Administration to put pressure on the legislative process, and (2) the exemption of Alaska from the wilderness study provisions of FLPLMA in the just belief that with passage of this bill "enough is enough".

However, one further critical provision is lacking. With the designation of over 100 million acres by this bill, coupled with the 50 million acres of units already existing in Alaska, nearly 40 percent of the land mass of the State would be within conservation systems. Surely that sufficiently meets even the most generous allocation of land for this specific purpose to the exclusion of most other land uses. Should this bill become law, we in Alaska must have some assurance that this represents a final settlement of the nation's conservation interests. We cannot continue to be exposed to the threats and intimidation of a zealous Executive which may feel in the future that the Congress did not meet the Administrations desires for land designations in Alaska.

Thus, absent from this bill is a provision barring further conservation system designations through administration action such as the Antiquities Act. Obviously, the Congress could act again in the future if it were so inclined, but the arbitrary permanent removal of federal lands from the public domain can no longer be left to the Executive in Alaska. Deletion of such a provision in this bill is a serious deficiency which must be corrected prior to any final action. " (Senate Report No. 96-413, pg.446)[1]

A later version of the Alaska lands legislation, the so-called Tsongas Substitute for H.R. 39, was amended to include the language now found in ANILCA Section 1326. During the August 18, 1980 Senate floor debate on the Tsongas Substitute, Senator Stevens explained that the Alaska State Legislature had asked the Alaska delegation to address seven consensus points that were not originally contained in the bill:

"I have uniformly responded to questions in those areas [Alaska communities] concerning the revised Tsongas substitute. This substitute now is a version of the Senate Energy Committee bill, but it does not satisfy the seven points that our State legislature asked us to address in connections with this legislation.

I have told Alaskans that while I cannot vote for the Tsongas substitute, I think it has to be judged as being a compromise that is better than the existing situation under the national

monuments and certainly better than those the President has indicated he will impose if a bill does not pass.

Our State legislature asked us to address seven points. We call them the consensus points .

The fifth injunction of the legislature was to be sure that there is what we call a no-more provision. This was a provision I insisted on in 1978. It was in the so-called Huckaby bill. It was in the bill that almost was approved in 1978. That clause is not in the committee bill. It is in the revised Tsongas substitute because the agreement we had in committee that when the bill had reached its final version on the floor of the Senate, the committee would agree to the no more clause. Realizing that the Tsongas revised substitute may be final version, the Senator from Massachusetts, at my request, has included that. " (Congressional Record – Senate August 18, 1980, pg. S11047)

Senator Stevens later in the floor debate formally introduced Amendment No. 1967 to H.R. 39 for the following purpose:

"To provide congressional oversight for major modifications of areas established or expanded by this Act and to require congressional approval for future major executive withdrawals of certain public lands in Alaska. "

The amendment containing the essential wording of Section 1326 was adopted and became part of the Tsongas substitute[2]. That bill was approved by the Senate on August 19, 1980 and by the House on November 12, 1980.

[3.003] The draft IAP/EIS incorrectly asserts that the BLM is required by Section 5(d)(1) of the Wild and Scenic Rivers Act to conduct reviews of the rivers within the NPRA-A to determine their eligibility and suitability for possible designation. In light of the provisions of Section **1326(b) and other actions taken by Congress in passing ANILCA, this is incorrect.**

[3.004] Congress added 26 rivers to the Wild and Scenic River System and was fully aware of the provisions in Section 5(d)(1). However, rather than allow a wholesale and never ending study process for rivers within the Federal public lands in Alaska, ANILCA Section 604(d) directed the study of an additional 12 rivers under Section 5(a) of the Wild and Scenic Rivers Act. That is the sole authority for wild and scenic river studies in Alaska, unless Congress directs additional studies at some point in the future.

The river studies required under ANILCA 604(d) were completed. Rather disingenuously, the draft IAP/EIS fails to inform the reader that four of the rivers, the Colville, Utukok, Etiviluk and Nigu, identified as suitable in one or more of the alternatives in the draft IAPIEIS, were included on the list of study rivers in ANILCA Section 604(a). It also fails to note that Section 604(b) states:

"For the rivers listed in paragraphs (77), (78), and (79) the studies prepared and transmitted to the Congress pursuant to Section 105(c) of the Naval Petroleum Reserves Production Act of 1976 (Public Law 94-528) shall satisfy the requirements of this section. "

[3.005] The NPRPA section 105(c) study, which was submitted to Congress April 12, 1979, recommended only the Colville for designation as a component of the system. The transmittal to Congress triggered a three year review period during which Congress could add the Colville to the system. Congress took no action on the recommendation. The 105(c) study determined the Utukok, Etiviluk, and Nigu Rivers were not suitable "due to insufficient flow of water and lack of outstanding attributes." We note that the Section 105(c) study is cited at least 7 times in the bibliography for the draft IAP/EIS and find it interesting that the preparers neglected to include this relevant information about these four rivers.

Because these rivers were previously studied, in addition to our general opposition to these unauthorized wild and scenic river reviews, we question both their re-evaluation and, as applicable, the proposed decision to recommend designation, particularly since they were

previously found unsuitable. Perhaps the planning team also took a "permissive interpretation" of their suitability as well.

[3.006] We also find that the wild and scenic river reviews are inconsistent with the BLM's own Wild and Scenic River Manual 8351. The draft IAP/EIS (Vol. I, Section 4.4.7, pg. 422) states:

"The BLM Manual states that. The BLM evaluates identified river segments for their eligibility and suitability for WSR river designation through its RMP process' (BLM 8351.06(B)). "

Perhaps to avoid making the public aware of the unfortunate fact that it has chosen to selectively ignore the guidance in its own manual, the BLM omitted a key sentence found in 8351.06(B). We offer a more complete citation here:

"B. Evaluation. The BLM evaluates identified river segments for their eligibility and suitability for WSR river designation through its RMP process. Activity planning shall not be used to accomplish such evaluations. (BLM 8351. 06(B) (emphasis added.)

The draft IAP/EIS (Vol. I, Section 1.5.1, pg. 5) contains the following explanation of the legislative constraints on the planning effort for NPR-A:

"The Department of the Interior and Related Agencies' Fiscal Year (FY) 1981 Appropriations Act exempted the Petroleum Reserve from two sections of FLPMA. It exempted the NPR-A from section 202 of FLPMA (43 USC § 1712), which requires the preparation of land use plans (called Resource Management Plans, or RMPs, in regulations- 43 CFR Part 1600-adopted by the BLM). Because of the exemption from FLPMA section 202, this plan is not being developed as a RMP. (emphasis added.)

We are unclear why the draft IAP/EIS fails to recognize or offer any explanation for this obvious conflict between the decision to include a wild and scenic river review in an activity plan and BLM Manual 8351 which states clearly that activity planning cannot be used to conduct such reviews.

The agency cannot have it both ways. Since the provisions of the NPRPA do not allow the BLM to prepare a Resource Management Plan (RMP), it cannot then include reviews that are restricted by its own directives to inclusion in an RMP. This is another reason that the wild and scenic river evaluations should be removed from the final IAP/EIS.

The draft IAP/EIS references the 1993 settlement agreement between American Rivers and the Department of the Interior (Case No. J91-023 Civil) as another justification for conducting wild and scenic river reviews. The settlement agreement required the BLM to modify BLM Manual 8351 to delete the exemption for Alaska for conducting wild and scenic river studies as part of the RMP process:

"BLM Manual, Part 8351.06F will be amended to delete the exemption for Alaska for conducting wild and scenic river studies as part of the RMP process. " (Settlement Agreement, pg. 2)

Again, since the current planning effort for the NPR-A is an integrated activity plan and not an RMP; it is not subject to the terms of the settlement agreement between BLM and American Rivers.

We should note that the same settlement agreement also stipulates:

"Pursuant to 1326(b) of the Alaska National Interest Lands Conservation Act (ANILCA), 16 U.S.C. §3213(b), no study shall be conducted for the single purpose of considering eligibility for wild and scenic river designation. "

While the draft IAP/EIS does not propose recommending rivers for designation in every alternative, the only purpose for conducting the review was to consider eligibility and suitability. Inserting the eligibility/suitability review into a larger planning process still violates this restriction.

ANILCA Title XI

[3.007] Chapter 4, Section 4.2.1.2 of the draft IAP/EIS makes a number of basic assumptions regarding impacts to oil and gas exploration and development activities, including transportation needs. The draft IAP/EIS then looks at how these activities, including transportation, would be affected under each of the 4 alternatives. One effect that is not considered under Alternatives B and C, the two alternatives recommending wild and scenic river designation, is how designation would impact development of transportation and utility system corridors.

The NPRPA (§6502) authorizes the Secretary to:

"make such dispositions of mineral materials and grant such rights-of-way, licenses and permits as may be necessary to carry out his responsibilities under this Act. "

A wild and scenic river is a conservation system unit (CSU) and the development of any transportation and utility system corridor within or across a CSU must follow the procedures outlined in Title XI of ANILCA, regardless of other authorities.

Because the Secretary has authority under the NPRPA to grant rights of way within the NPR-A, granting or permitting a right of way across a wild and scenic river corridor within the NPR-A would be subject to the procedural requirements of ANILCA Section 1104, which states:

"Notwithstanding any provision of applicable law, no action by any Federal agency under applicable law with respect to the approval or disapproval of the authorization, in whole or in part, of any transportation or utility system shall have any force or effect unless the provisions of this section are complied with. (1104(a))

While we have already raised objections to the inclusion of wild and scenic river reviews and recommendations in the draft IAP/EIS and oppose any designation of additional rivers in Alaska, we concede the possibility that one or more of the rivers recommended in the draft IAP/EIS could be designated. We also realize that the identified rivers are within identified Economic Zones or portions of zones within NPR-A that are assumed to have relatively small amounts of recoverable oil and gas. Nevertheless, **[3.008]** the final IAPIEIS should examine the potential effects of wild and scenic river corridors on potential future development of transportation and utility systems within NPR-A.

[3.009] The draft IAP/EIS (Chap. 4, pg.4) notes that the BLM issues minimum impact rights-of-way for overland moves to bring supplies to villages. ANILCA Section IIII guarantees temporary access for a variety of purposes to private landowners within the NPR-A. That temporary access is regulated under 43 CFR §36.12. The final IAPIEIS should include this information.

Wilderness Characteristics

The Commission objects to the inclusion of any inventory of wilderness characteristics in the IAP/EIS. As with the wild and scenic river review, the question of wilderness within the NPR-A has been addressed under the NPRPA. Unlike the wild and scenic river reviews, the draft IAP/EIS does acknowledge the NPRPA Section 105(c) study and the recommendation of no wilderness in the 1979 report to Congress. It also cites previous plans to explain how the question of wilderness in the NPR-A has been addressed:

"The BLM recognizes the Congressional intent of PL 96-514, which indicates that no "wilderness" designations will be made in the Reserve and the intent of PL 96-487 [ANILCA]. The BLM cannot reinterpret Congressional authority through administrative procedures. " (1983 NPR-A FEIS)

"Because wilderness designation would not meet the purposes and objectives of this planning effort, BLM decided not to consider possible wilderness designation for the planning area in the IAP/EIS." (1998 NE NPR-AIAP/EIS)

"Because creating new wilderness designations is inconsistent with the management objective, alternatives proposing such an action [wilderness designation] are outside the scope of the

Amended IAP/EIS and this Supplement thereto." (2008 NE NPR-A Final Supplemental IAP/EIS) **[3.010]** We strongly disagree with the claim that Secretary Salazar's June 1, 2011 directive to consider wilderness values in management decisions applies to the NPR-A. We understand that the scope of land use planning in the Reserve is limited by the Reserve's organic act. The NPRPA 42 USC § 6506a(c) states that FLPMA Sections 202 and 603 do not apply to the Reserve.

(c) Land use planning; BLM wilderness study The provisions of section 202 and section 603 of the Federal Land Policy and Management Act of 1976 ... shall not be applicable to the Reserve.

The FLPMA Section 603 exemption clearly means that there is to be no wilderness reviews or wilderness management in the NPR-A. This is further confirmed by ANILCA, which specifically excluded the Reserve from the wilderness study area and interim management requirements of Sections 1001 and 1004.

In addition, both ANILCA Section 1320 and Secretarial Order 3310, as revised by the June 1, 2011 Salazar Memo, rely on FLPMA Section 202 authority, which as BLM acknowledges, does not apply in the Reserve. While FLPMA Section 201 authorizes BLM to inventory resource and other values, it is not within BLM's authority to implement land use planning direction from which the Reserve is specifically exempted by the NPRP A. As the 1983 NPR-A FEIS stated, the BLM cannot reinterpret Congressional authority through administrative procedures.

The Commission appreciates the opportunity to comment on this plan. We also thank the BLM for agreeing to extend the comment period on this plan so that the public would have more time to review it and offer meaningful comments.

We are hopeful that the BLM will comply with applicable statutes and policies and decide against including in the final IAP/EIS what we maintain are unauthorized and unnecessary wild and scenic river reviews and wilderness characteristics inventories.

Sincerely,

Stan Leaphart
Executive Director

cc: Governor Sean Parnell
Daniel Sullivan, Commissioner, Department of Natural Resources
Sue Magee, State ANILCA Program Coordinator
Sara Longan, Office of Project Management and Permitting

[1] While the legislative history of ANILCA is extensive, given the number of bills introduced by both the House and Senate, Senate Report 96-413 from the Senate Committee on Energy and Natural Resources is acknowledged as one of 2 committee reports that constitute the most relevant legislative history for the Act. It is cited at the end of the original slip law under Legislative History.

[2] Subsection 1324(a) of Amendment 1967 is identical to the language found in Section 1326(a), however subsection (b) of the amendment was more inclusive than the final language of Section 1326(b): "No further studies of Federal lands for the single purpose of considering the establishment of a conservation system unit, special management area, national recreation area, national conservation area, or for related or similar purposes shall be conducted unless authorized by this Act or further Act of Congress." In this instance "special management area" referred to proposed areas within the Tongass National Forest.

[Response to 3.001]
The BLM explains its authority and mandate for considering Wild and Scenic Rivers in section 1.4.

[Response to 3.002]
The BLM explains its authority and mandate for considering Wild and Scenic Rivers in section 1.4. Section 1326(b) of ANILCA does not apply because the IAP/EIS is not a single purpose study as described therein. Thus, the BLM properly reviewed Wild and Scenic River eligibility in this planning effort.

[Response to 3.003]
The BLM explains its authority and mandate for considering Wild and Scenic Rivers in section 1.4. Section 5(d)(1) of the Wild and Scenic Rivers Act provides: "In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials." Also, the NPRPA does not exempt NPR-A from the Wild and Scenic Rivers Act, and Section 1326(b) of ANILCA does not apply because the IAP/EIS is not a single purpose study as described therein. Thus, the BLM properly reviewed Wild and Scenic River eligibility in this planning effort.

[Response to 3.004]
The BLM explains its authority and mandate for considering Wild and Scenic Rivers in section 1.4. Section 5(d)(1) of the Wild and Scenic Rivers Act provides: "In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials."

[Response to 3.005]
The text has been changed to reference the 105(c) study.

[Response to 3.006]
The BLM manual has been updated to clarify the fact that Wild and Scenic River suitability evaluations are not limited to Resource Management Plans. "The BLM will prepare a detailed study report for all rivers congressionally authorized for study and for all other rivers identified by the BLM as potential additions to the National System through its public planning process. The BLM may employ a variety of planning approaches, including a land use plan or programmatic plan amendment, depending on timing and available information and resources." (MS 6400 4., BLM, 2012)

[Response to 3.007]
A discussion of potential impacts of Wild and Scenic River designation impacts specifically on transportation and utility systems has been added to the analysis of Alternatives B-1 and C.

[Response to 3.008]
A discussion of potential impacts of Wild and Scenic River designation impacts specifically on transportation and utility systems has been added to the analysis of Alternatives B-1 and C.

[Response to 3.009]
Section 4.2 contains basic assumptions for the environmental consequences assessment, not an evaluation. The overland moves that are referenced are those that require a BLM authorization. It does not pertain to access for private landowners.

[Response to 3.010]
Section 2.4.1 of the IAP/EIS, “Alternatives Considered but Eliminated from Detailed Analysis,” addresses this issue. The BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort, although the BLM did analyze alternatives that would protect a broad range and areas of land with such wilderness characteristics. The BLM is

not precluded from making recommendations regarding designation of Wilderness within the planning area.

Congress provided the exemption from FLPMA Section 603's wilderness study requirements because NPR-A's wilderness values had already been studied in the late 1970s as directed by Section 105(c) of the NPRPA. In so doing, Congress did not preclude future wilderness reviews or protection of wilderness values. Consistent with this understanding, ANILCA Section 1320 grants the Secretary authority to "identify areas in Alaska which he determines are suitable as wilderness."

COMMUNICATION NUMBER 5
Lisa Murkowski, Senator
U.S. Senate

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, Alaska 99508

May 30, 2012

RE: Comments on Draft Integrated Activity Plan/ EIA for National Petroleum Reserve-Alaska:

As an elected official I normally do not to provide comments for the record on land planning efforts in Alaska, instead responding once issues reach the level of congressional review. But given the vital importance of the resources underlying the National Petroleum Reserve-Alaska to the State of Alaska's and the nation's long-term economic, energy, national security and environmental well-being, I am submitting a series of comments on the current planning effort for the nearly 23-million acres of northern Alaska contained within the boundaries of the reserve.

I am writing in support of the agency generally adopting management plan Alternative D, the alternative that will provide the most freedom for development of the hydrocarbon resources of the former Naval Petroleum Reserve #4 in the future. While I support the importance of the Department of the Interior protecting key wildlife and waterfowl habitat, **[5.001]** the rationale for the designation in the National Petroleum Reserve-Alaska of additional river segments as Wild and Scenic or the creation of new or expanded "Special Areas" is not clear, and would apparently serve no other unmet goal than impeding pipeline construction or petroleum development.

I supported a 10-year deferral of any petroleum leasing in an area northeast of Teshekpuk Lake in 2008 to provide additional time to consider the protections needed for migratory caribou and for waterfowl that nest in the wetlands near Alaska's Arctic coast. Given the odd and seemingly rushed planning effort and recent resource findings not fully reflected in the current draft plans, however, I am forced to strongly voice my support for Alternative D at this time.

When President Warren G. Harding 91 years ago issued his executive order (Public Land Order 3474, dated May 31, 1921), the President did so because of his view that while it is vital for America to protect the wildlife and environment of our public lands, it is also vital for our national security and our economic well-being to protect the ability for the nation and its military to gain access to oil and natural gas from lands that contain such hydrocarbons, since they unfortunately do not exist everywhere and often are located in places where we might wish they were not. The primary purpose of the four petroleum reserves then created were to protect access to oil and natural gas for America in the "likelihood of a sustained interruption in oil supplies" as noted by a 2002 Congressional Research Service report.

When Congress in 1976 transferred NPR-A from the Navy's control to that of the Department of the Interior (PL 94-258 (90 Stat. 303) it made clear that while the Secretary of the Interior is authorized in Sec. 103 (b) to "promulgate such rules and regulations as he deems necessary and appropriate for the protection of such ("environmental, fish and wildlife and historical or scenic") values within the reserve," the law in Sec. 102 made it equally clear that "all other provisions of law heretofore enacted and actions heretofore taken reserving such lands as a Naval Petroleum Reserve shall remain in full force and effect." In my view that means that the primary purpose for the reservation of the 23 million acres remains in force and is for the development and production of vitally needed hydrocarbon reserves for this nation. My concern, as I read the current draft plan, is that the Bureau of Land Management (BLM) is proposing to effectively make the goal of energy production subservient to the promotion of wildlife and the

creation of new de facto wilderness areas in Alaska if several of the planning alternatives are implemented. That presents economic, policy and legal problems for me on several grounds.

When Congress passed the Alaska National Interest Lands Conservation Act (PL 96-487 (94 Stat. 2371)) in 1980 it contained what Alaskans term as the "no more" clause that simply says that Alaska has given its share of land for federal Conservation System Units (CSUs). Sec. 101(d) contains the following general guideline and states that the need for more parks, preserves, monuments and wild and scenic rivers in Alaska has been met: "(d) This act provides sufficient protection for the national interest in the scenic, natural, cultural and environmental values on the public lands in Alaska. ... accordingly, the designation and disposition of the public lands in Alaska pursuant to this act are found to represent a proper balance between the reservation of national conservation system units and those public lands necessary and appropriate for more intensive use and disposition and thus Congress believes that the need for future legislation designating new conservation system units, new national conservation areas or new national recreation areas has been obviated thereby."

[5.002] Section 1326(b) of the act further specifically bars federal agencies from even being allowed to study lands for consideration for CSU designations unless the Congress specifically authorizes the studies. By this plan you are specifically considering the creation of between three and 12 new Wild and Scenic Rivers in Alaska as proposed in Alternatives B and C – the Department having a different view from Alaskans as to whether such consideration has been "authorized" or needs to be specifically authorized, by Congress for such designations to even be considered to take place in Alaska.

[5.003] I believe two of the four alternatives that you are considering violate ANILCA and various NPR-A authorizing Acts by proposing to place up to 52 percent of the reserve (7.2 million acres) into special use areas that would be off limits to hydrocarbon production. Congress in February 1920 and again in June 1920 (41, Stat. 437 and 41 Stat. 912) specifically authorized the President to permit the drilling of additional wells inside any Naval Petroleum Reserve.

You correctly note in the plan that the U.S. Geological Survey recently downgraded its estimates for the amount of oil likely to be recovered from NPRA. But I find **[5.004]** basing a management plan only on the most recent 2010-11 USGS estimates as shortsighted as it would have been to base a management plan on the May 2002 USGS estimates that dramatically increased the forecasts for oil reserves under NPRA compared to the 1980-era estimates by USGS that placed the forecast reserves at a far lower number. At the time of the first 1983 modern-era lease sale in NPRA, the USGS forecast was for technically recoverable resources of 820 million to 5.4 billion barrels. In 2002, USGS raised that forecast for technically recoverable oil to 5.9 to 13.2 billion barrels.

The most recent estimates that you cite in the planning effort drop the forecast back to a range of between 100 million and 2.7 billion barrels of oil with a mean forecast of 604 million barrels. But the USGS forecast, dated October 2010, presented to my office places that mean estimate at 896 million barrels of oil – 48 percent more oil than you base your planning process upon. I hope that discrepancy in forecasts will be resolved before a final land plan is completed. **[5.005]** But, my bigger concern is that you largely discount the importance of NPR-A for natural gas production and totally ignore its oil shale potential.

As I read **[5.006]** the USGS's most recent assessment, it predicts technically recoverable natural gas resources in conventional accumulations within NPR-A at a mean of 52.8 trillion cubic feet of natural gas, substantially more than the 17.55 trillion cubic feet upon which your plan is predicated. The USGS report provided to my office in October 2010, shows a 5% chance that NPRA will yield 77.5 trillion cubic feet of conventional natural gas and a 95% chance that it will contain 31.0 trillion cubic feet – still far above the 17.55 tcf estimate that your plan is based upon. I truly hope that the final plan will clarify the 78% discrepancy between these figures.

I point this out because while the nation currently has a growing supply of natural gas due to advances in shale gas production, the nation may well need conventional natural gas reserves from Alaska for economic and national security reasons should recent trends in shale gas production reverse themselves because of greater experience on the rates of shale gas production falloff over time, changes in environmental regulations limiting or increasing the cost of hydraulic fracturing of rock, or because of other economic factors. Alaska for its long-term economic health certainly will need sufficient gas to be discovered on the North Slope so that it is economic for the installation of a large diameter natural gas pipeline to bring North Slope gas reserves to market. While there are 35 trillion cubic feet of known reserves at Prudhoe Bay and Point Thompson, to make an Alaska gas line economic to build, it is quite likely that larger reserves will be needed.

By USGS and BOEM estimates compiled by the Department of the Interior and released on March, 1, 2012, all of Alaska may contain a mean estimate of 249.2 trillion cubic feet of conventional natural gas and 394.7 trillion cubic feet of gas when methane hydrates and coalbed methane are included. While only a fifth of that gas will come from NPR-A itself, according to the estimates, far more than half of that gas will need to travel by pipeline across NPRA from the Chukchi and Beaufort Seas and other Arctic OCS finds to access a Trans-Alaska Gas Pipeline near Prudhoe Bay. Those reserves are vital for the nation's and Alaska's economic future.

While you mention that several of your plan alternatives do not bar such an east-west delivery pipeline through NPR-A from being approved as part of a separate DEIS process, there is substantial evidence throughout the draft plan that the route for such a pipeline, its economics and its economic usefulness to facilitate additional oil production from satellite fields in the central areas of NPR-A might be drastically lessened by adoption of Alternatives B or C. In my view, only Alternative D should be adopted unless a corridor is sought and approved for delivery of additional natural gas to a Trans-Alaska gas pipeline under other Alternatives. That will prevent complications on pipeline routing and river crossings from occurring should additional Wild and Scenic Rivers ever be designated by Congress, and will prevent routing issues from additionally restrictive measures to protect new "special use" areas.

[5.007] The plan ignores the most recent assessment of oil shale potential in Northern Alaska. In February 2012, the U.S. Geological Survey released its assessment that oil shale from the Shublik, Kingak and Brookian formation source rocks may produce up to 2 billion barrels of oil and up to nearly 80 trillion cubic feet of natural gas, the mean forecasts at present being 849 million barrels of oil, 79.785 trillion cubic feet of gas and 262 million barrels of natural gas liquids. The report, admittedly not available to BLM as you prepared your NPR-A plan, is less specific as to the amounts of shale oil and gas that lie inside the boundaries of NPR-A compared to neighboring state lands to the east. Still I do not believe that the BLM plan should proceed and be finalized without taking oil shale data into account. And further I believe the plan should be delayed at least until a currently underway exploration effort by Great Bear Resources casts light on the economic viability of oil and potentially gas shale development on Alaska's North Slope.

USGS in briefings this spring to Congress made it clear that their resource estimates of both oil and gas shale are currently statistically conservative until efforts confirm the economics of oil and gas shale recovery in Alaska. If the viability of oil and gas shale production is confirmed, then the estimates of potential, technically recoverable shale oil and gas resources will shift from a probability range of 0 to 2 billion barrels for oil, to some considerably higher estimate. **[5.008]** There is no reason to proceed with the current planning effort that could well result in placing a large percentage of future oil and gas shale lands off limits to development until there is a better estimate of the amount of resource that might be precluded from development by adoption of the current planning alternatives. Clearly shale oil production may entail environmental impacts that will be unacceptable from an environmental standpoint – notably in the Teshekpuk Lake region. I believe that at the least, however, that decision should be made

only after an informed discussion is possible on the amount of resource that will be foregone, should several of the planning alternatives prevail.

The oil and gas shale resource discussion is just one of the reasons why I doubt the need for completion of a comprehensive plan for the area at this time. Currently some 4 million acres of Northwest NPR-A are being managed under a plan finished in 2004. A larger area in Northeast NPR-A is being managed by a plan finished in 2008, just four years ago, and the region along the Colville River is being managed by a Special Area Management Plan. Outside of a political decision by the Administration that it wants to complete a new "comprehensive" management plan for NPR-A prior to the end of its current term in January 2013 and perhaps before November's election, I can find few convincing reasons for why BLM has engaged in the expense of this planning effort at this time. The BLM has many obligations to the State of Alaska that they are currently unable to fulfill due to funding shortfalls. Normally land plans extend for 10 to even 15-year lengths and it is hard for me to understand the need for a new planning effort until at least 2014, even given the Endangered Species Act listing efforts for the polar bear, for the Pacific walrus and bearded and ringed seals.

[5.009] A case in point is that BLM is basing its analysis of economically recoverable oil and gas assuming projections for oil at $180 per barrel (compared to current prices approximately $100 per barrel). The plan is assuming a price for natural gas of $9.33 per thousand cubic feet, where the current U.S. Lower 48 price for gas is approximately $2.00 per thousand cubic feet. While I appreciate that the oil and gas price forecast plan assumptions are likely favorable for supporting oil and gas development in the reserve, the forecasts may be very hard for BLM to support, threatening the legal viability of the planning effort, should the plan be challenged. The prices used by BLM certainly are far higher than those forecast by the Department of Energy's Energy Information Agency, which in 2011 placed its mean forecast for the price of oil in 2035 at $125 a barrel in 2009 dollars. The forecast market prices are just another reason why I believe the planning effort should be delayed until global energy price forecasts for the future stabilize – something not expected to occur by autumn 2012, the target date for completion of this planning effort according to BLM. I question and request an explanation for the methodology in addition to disputing the conclusion which this analysis supports.

I note, importantly, that President Obama announced on May 14, 2011 the accelerated development of the NPR-A. He did not request action from Congress to enable this acceleration and made no mention of identifying new areas to restrict from development. It will be unlikely if not impossible for Americans to take this commitment seriously under any considered alternative other than Alternative D, and it would be a "bait and switch" to advertise such accelerated development only to keep the area under status quo access levels or, worse, to place additional areas into any form of protected status. Alaskans of all political affiliations support development in the NPR-A and expect promises from the federal government to be kept in this regard; Americans likewise expect Congressionally designated petroleum fields to be developed as such and are averse to needless sterilization of valuable resources.

My chief concern with the planning effort is that **[5.010]** even though the narrative says the plan will not make it impossible to select and permit a pipeline corridor across NPR-A to bring northern off-shore oil and natural gas to land, that the location of several of the proposed Wild and Scenic Rivers in two of the alternatives would force the pipeline onto a far southern route corridor, a route that might, depending on soil conditions, increase its cost to a prohibitive level and fail to allow for an efficient route for purposes of a common carrier line. Such a route might well make oil production from eastern NPR-A, not from the current CD-5 area, but from future marginal oil units, less economic. My understanding is that Shell Oil, for one, this summer is planning field work to assess the economic and environmental issues that may face a pipeline routing across NPR-A. I firmly believe that **[5.011]** BLM's planning effort should be delayed until the industry has a chance to propose a potential route across the reserve and consider the environmental impacts and the economic effects a pipeline will have on improving or harming

the economics for additional oil development in areas south of Teshekpuk Lake – in areas that all of the alternatives propose to remain open to oil and gas leasing.

Furthermore, I both fear and have reason to believe that the concerted nationwide effort from activist environmental groups in support of Alternative B is aimed less at preserving non-energy values of the National Petroleum Reserve and instead more aimed at frustrating any construction of pipelines within or across the area so as to delay or add cost to the development and transportation of energy resources from offshore areas. Only Alternative D will allow for appropriate balance between the NPRA's purposes. I expressly request that, when the public comments are reviewed, they be classified to reflect the respective quantities of original comments versus "form letter" or otherwise such mass-generated comments requiring little effort from prompted individuals. I also request that the comments be classified so as to reflect how many originated from Alaskans versus non-Alaskans, including state-by-state or region-by-region breakdowns.

I continue to review the nearly 700-page plan and likely will have additional detailed concerns with the planning document. I would like to note that my staff did not receive a hard copy of the planning document until Thursday, May 25, only days before the original comment period deadline. The website with the documents supporting the draft displays well over 80 separate .pdf files; these each take substantial time to load on a computer, especially in many areas of Alaska which are confined to relatively slow Internet connection speeds. It is unclear to me why these documents would not be also available in consolidated form and simply posted on a webpage in simple text format rather than individually parceled out in such large data files. In any event, substantially more time for review and comment generation is necessary.

I appreciate the 15 days comment extension, but consider this addition insufficient for purposes of our addressing the issues outlined here. I urge you to extend the time for public review and comment on the plan at least by an additional 60 to 90 days. Seventy-five days is insufficient to review and carefully research comments on the 23 million acres – a full 6 percent of Alaska – that would be impacted by the plan. BLM is proposing to provide the same timeframes for comments as allowed by both the far smaller planning efforts in the Northeastern and Northwestern NPR-A.

Alaskans have more at stake, so require and deserve more time to consider issues such as the protection of the Western Arctic caribou herd, the state's largest, of the need for changes to the Kasegaluk Lagoon Special Area to protect birds and marine mammals, how the plan indirectly impacts future mineral and coal production on Native lands west of the NPR-A boundary, and as to how it will impact development along the Colville River Valley. If several of the provisions from Alternatives B and C were to appear in a final plan, it would radically change the likelihood of energy exploration and development in large areas of NPR-A in the future and affect Alaskans for decades to come.

For these reasons, I support Alternative D. Alternative A, while not as offensive to the purposes of the NPR-A, remains unsatisfactory on a policy level, particularly from a standpoint of Congressional intent. If Alternative B or C is adopted, I will pursue its legislative reversal.

Sincerely,
Lisa Murkowski,
U.S. Senator, Alaska

[Response to 5.001]
Consideration of Special Area designation and recommendations for Wild and Scenic designation is consistent with BLM's responsibilities in NPR-A. Special Area designation does not restrict future development. See sections 1.5 and 3.4.7 in the IAP/EIS. The BLM has leased lands in Special Areas in the past, some current leases are in Special Areas, and all of the alternatives in the current plan would allow leasing in some Special Area lands. Wild and Scenic River designation would be made by Congress and would be subject to any restrictions imposed by Congress.

[Response to 5.002]
Section 5(d)(1) of the Wild and Scenic Rivers Act provides: "In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials." Also, the NPRPA does not exempt NPR-A from the Wild and Scenic Rivers Act, and Section 1326(b) of ANILCA does not apply because the IAP/EIS is not a single purpose study as described therein. Thus, BLM properly reviewed Wild and Scenic River eligibility in this planning effort.

[Response to 5.003]
The range of alternatives presented in the IAP/EIS are consistent with the purposes of the plan as described in section 1.1 and with the underlying legislative and regulatory requirements for NPR-A's management.

[Response to 5.004]
The current USGS analysis is based on more information, including information from new drilling, than previous estimates. Thus, it is the best available information and is appropriate for use in the IAP/EIS.

[Response to 5.005]
See the discussions on oil and gas projections and development of undiscovered and discovered resources in section 4.2.1.2 under the heading of "Resource Potential and Petroleum-related Activities" for a discussion of how the IAP/EIS includes natural gas production and oil shale potential development.

[Response to 5.006]
The volumes cited in this comment equate technically recoverable resources with economically recoverable resources. By definition, these are not comparable figures.

In addition, volumes used to determine the commenter's 78 percent discrepancy equate the 5 percent probability level (77.5 Tcf of gas), a 1-in-20 chance, with the Mean or average probability level (17.55 Tcf of gas). By definition, differing probability levels are not comparable.

The Mean estimate of 52.8 trillion cubic feet (Tcf) of natural gas in the IAP/EIS are undiscovered technically recoverable gas resources, which are quantities of gas producible using currently available technology and industry practices, regardless of economic considerations.

The Mean estimate of 17.55 Tcf of natural gas in the IAP/EIS is the economic volume based on $9.33 per thousand cubic feet and is derived from an assessment by the USGS titled "Economic Analysis of the 2010 U.S. Geological Survey Assessment of Undiscovered Oil and Gas in the NPR-A" by Emil D. Attanasi and Philip A. Freeman. Note that the volumes reported in the DEIS have been adjusted to 16.45 Tcf of natural gas at $8.67 per thousand cubic feet, based on the 2012 Energy Information Agency (EIA) commodity price update.

[Response to 5.007]
The BLM has taken cognizance of the USGS's 2012 assessment. A discussion of BLM's rationale for not considering the development of unconventional oil and gas development from source rocks within the NPR-A is provided in section 4.2.1.2 in the assumptions for resource potential and petroleum-related activities.

[Response to 5.008]
The BLM has determined that a new plan is appropriate at this time, in part to provide better underlying analysis, analysis that can be used as the agency follows the President's mandate for annual lease sales in NPR-A. Waiting until we have a better understanding of shale oil in the Arctic in general and NPR-A in particular could involve many years of delay.

[Response to 5.009]
In an effort to ensure that the IAP/EIS does not underestimate the impacts that could occur if leased lands are developed for oil and gas production, the BLM has assumed the highest oil and gas prices estimated by the Energy Information Administration, rather than their reference prices for oil and gas. This is explained in section 4.2.1.2.

[Response to 5.010]
The rivers considered for designation as Wild and Scenic Rivers are in the southern part of the NPR-A. No rivers in the northern part of the NPR-A are considered for designation under any of the alternatives. The preferred alternative would not recommend any river for W&SR designation.

[Response to 5.011]
The BLM has determined that a new plan is appropriate at this time, in part to provide better underlying analysis, analysis that can be used as the agency follows the President's mandate for annual lease sales in NPR-A. Waiting until industry determines that offshore resources justifies construction of onshore support infrastructure in NPR-A and proposes such a route to appropriate permitting agencies could involve many years of delay.

COMMUNICATION NUMBER 6
Sarah Conn, Field Office Supervisor
U.S. Fish and Wildlife Service

United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
June 14, 2012

Memorandum

To: Jim Ducker, Bureau of Land Management, Alaska Project Lead

From: Sarah Conn, U.S. Fish & Wildlife Service, Fairbanks Field Office Supervisor, Region 7

Subject: Comments on the 2012 Draft Integrated Activity Plan/Environmental Impact Statement for the National Petroleum Reserve – Alaska

The U.S. Fish and Wildlife Service has reviewed the Draft Integrated Activity Plan/Environmental Impact Statement (DEIS) prepared by the Bureau of Land Management (BLM) for the National Petroleum Reserve-Alaska (NPR-A). Three action alternatives are presented in the DEIS, in addition to a No Action Alternative that would retain the current management strategies authorized by the Records of Decision (ROD) for the 2004 Northwest NPR-A EIS and 2008 Northeast NPR-A Supplemental EIS (SEIS) as well as the decisions in the 2008 Colville River Special Area Management Plan.

The 23 million-acre NPR-A includes some of the most valuable fish and wildlife habitats on the Arctic Coastal Plain, including those associated with the Teshekpuk Lake region, the Colville River corridor, Kasegaluk Lagoon, Peard Bay, Dease Inlet, and the Utukok River Uplands. Some of these areas have been previously designated as Special Areas because of their concentrations of molting geese and other waterbirds; important nesting and staging areas for waterfowl, shorebirds, and raptors; polar bear denning and walrus resting areas; overwintering and spawning areas for fish; and calving and insect-relief habitat for caribou. Additionally, the central region of the NPR-A contains an unusual concentration of deep-water lakes and provides habitats for species of management concern such as the Yellow-billed Loon. As a result of this biological diversity and richness, the NPR-A supports important subsistence resources including fisheries on the Colville and Ublutuoch Rivers, Fish Creek, Judy Creek, and their tributaries, and important habitats for the Teshekpuk Lake and Western Arctic caribou herds.

Our review of the DEIS focused on the potential impacts to our federal trust resources including migratory birds, marine mammals, anadromous fish, subsistence resources, and species listed or proposed for listing under the Endangered Species Act. The Service believes the protective measures adopted in this process will play a critical role in the future of this diverse and biologically important landscape.

Because of the importance of the Teshekpuk Lake area to molting geese, other waterbirds, caribou and subsistence users, the dynamics of the coastal plain environment, and the impacts of climate change on habitats and wildlife populations, the Service believes avoiding surface and hydrologic disturbance in this biologically sensitive area provides the greatest level of protection (and least risk) to wildlife. We recommend the western expansion of the Teshekpuk Lake Special Area (TLSA) to Dease Inlet and the adoption of a no-lease strategy for a majority TLSA as identified in Alternative B. We further recommend the addition of Peard Bay as a Special Area and the proposed expansion of the Utukok River Uplands Special Area (URUSA) as outlined in Alternative B. The Service endorses the additional protective status for these important areas and would welcome the opportunity to work with BLM to conserve these fish and wildlife resources.

The Service recommends a reduced footprint associated with development on the North Slope wherever feasible to lessen impacts in biologically sensitive areas. The Service supports a collaborative, landscape-level approach to planning minimum-impact infrastructure. We recommend conditions or stipulations be included in the agency preferred alternative that would require minimal footprint infrastructure, consolidated facilities, and the avoidance of higher-value habitats, to the maximum extent possible.

Climate change will have significant impacts on fish and wildlife and, consequently, how we manage them. The Service recommends continued climate modeling to plan for a changing environment and commends BLM for its active participation in the Arctic LCC and NSSI. We support BLM's continued involvement in the Arctic LCC and NSSI as a cornerstone for identifying and filling important science needs in the NPR-A.

The Service recommends the development of a science-based research and monitoring plan to evaluate the impacts of management decisions and the effectiveness of proposed mitigation measures adopted through the IAP/EIS process. The research and monitoring plan should be central to a peer-reviewed Adaptive Management Strategy that should be completed prior to development in the NPR-A.

Thank you for the opportunity to comment. If you have questions concerning our comments please contact me at (907) 456-0499.

Attachment

Our comments are focused upon potential impacts to federal trusts resources including migratory birds, marine mammals, anadromous fish, subsistence resources (e.g., caribou) and species listed or candidates under the Endangered Species Act. Comments are organized into two sections: 1) General Comments, which address broad issues or issues applicable to several of the analyzed alternatives; and 2) Specific Comments on Alternatives in the Draft IAP/EIS.

GENERAL COMMENTS

Designated Special Areas

The Naval Petroleum Reserve Act (Act) of 1976 authorized the Secretary of the Interior to designate Special Areas within the National Petroleum Reserve-Alaska (NPR-A) that contain significant surface resource values and to assure the maximum protection of these resources in conjunction with exploration of the reserve. In 1977, as a result of the Act, the Secretary designated three Special Areas within the NPR-A; the Teshekpuk Lake Special Area (TLSA), the Colville River Special Area (CRSA), and the Utukok River Uplands Special Area (URUSA). The Record of Decision (ROD) for the 2004 Northwest NPR-A Final Integrated Activity Plan/Environmental Impact Statement (FEIS) added Kasegaluk Lagoon Special Area (KLSA) and the ROD for the 2008 Supplemental NPR-A EIS (SEIS) expanded the TLSA. Peard Bay is proposed for designation as a Special Area under Alternatives B and C in the 2012 NPR-A Draft EIS (DEIS).

Although Special Area status highlights the biologic resources of an area, the designation itself does not automatically impose specific protections. Under 43 CFR 2361.1(e)(1), Federal regulations state that such values may be protected by limiting, restricting, or prohibiting the use of and access to appropriate lands. Special Areas within the NPR-A therefore, only are afforded protection through the application of Stipulations and Best Management Practices (BMPs). In the DEIS, Special Area designation and level of protection varies significantly among alternatives.

Teshekpuk Lake Special Area

The value to fish, wildlife and subsistence resources of the area surrounding Teshekpuk Lake has long been recognized, leading to designation of the TLSA. The numbers of Pacific brant and the total numbers of all geese that use the region north and east of Teshekpuk Lake exceed those of any known molting area in the North American and Siberian Arctic. Although

recognized principally for its concentrations of molting geese, the TLSA also provides important nesting, brood-rearing and staging habitat for other waterfowl, including listed spectacled eiders, and shorebirds. It also provides terrestrial denning habitat used by polar bears and important calving, migration, and insect-relief habitat for caribou of the Teshekpuk Lake Herd (TLH), the herd harvested most heavily by Alaskan North Slope subsistence communities. The combination and concentration of these resources make the TLSA uniquely valuable to fish and wildlife and to local subsistence communities.

The Service has analyzed the potential for conflicts between oil development and waterfowl in the Teshekpuk Lake region (Martin 1998). These analyses noted evidence of behavioral and physiological responses by molting brant to aircraft and other sources of disturbance that would likely accompany oil and gas development. Such disturbance could cause increased energy expenditures, decreased foraging time, and depleted lipid and protein reserves, which may increase the duration of the flightless period and susceptibility to predation. Oil and gas development in the area also could displace birds to sub-optimal habitats, potentially resulting in over-crowding and a decline in forage availability. Any of these responses to increased disturbance, or any combination of them, could result in reduced survival of molting brant as well as other molting geese.

The portion of the Arctic coast north of Teshekpuk Lake is subject to coastal erosion and thermokarst lake processes (Mars and Houseknecht 2007) resulting in changing habitat conditions, the dynamics of which may be exacerbated by climate change. Recent studies on the spatial distribution of molting geese near Teshekpuk Lake indicate that habitats in the area are changing in response to shifting environmental conditions (Flint et al. 2007). These changes may be causing shifts in the distribution and abundance of goose populations utilizing the Teshekpuk area. Stresses associated with oil development could add to or accelerate impacts to molting geese and other wildlife already occurring due to climate change.

Because of the importance of the Teshekpuk Lake area to molting geese, other waterbirds, caribou and subsistence users, the dynamics of the coastal plain environment, and the impacts of climate change on habitats and wildlife populations, the Service believes avoiding surface and hydrologic disturbance in this biologically sensitive area provides the greatest level of protection (and least risk) to wildlife. We recommend the expansion and no-lease strategy for the portion of the TLSA identified in Alternative B (Maps 2-2 and 2-2T) of the DEIS as "Unavailable" for oil and gas leasing and "no exploratory or non-subsistence permanent infrastructure (including for potential Chukchi Sea development.)"

Colville River Special Area

The 2.3-million acre CRSA lies along the eastern and southeastern boundary of the NPR-A. The upper Colville River has long been recognized as one of the most important raptor nesting areas in North America, both in terms of species diversity and breeding density (Kessel and Cade 1956, 1958; Cade 1960, White and Cade 1971). The river corridor and surrounding tundra provide a diverse suite of habitats, resulting in an abundance of prey (small birds and mammals) for raptors nesting along the cliffs formed by the river. Arctic peregrine falcons, gyrfalcons, and rough-legged hawks are regular breeders along the Colville River (Ritchie and Wildman 2000, Swem 1996). Because these species and subspecies nest exclusively in the Arctic and sub-Arctic, a significant proportion of the United States' population of these birds nest within the NPR-A, primarily along the Colville River and several of its tributaries.

Approximately one-fourth of Alaska's Arctic peregrine population nests along the Colville River (Ritchie and Wildman 2000). Banded fledglings from peregrine nests along the Colville have nested in subsequent years in other North Slope drainages (USFWS unpubl. data), suggesting that the Colville River breeding population acts as a source for populations in adjacent areas. Protecting habitats within the CRSA, therefore, is likely important for maintaining local raptor populations as well as populations over a broader area of the North Slope.

[6.001] Because of the unique raptor nesting and foraging habitats within the CRSA, the Service recommends the area be afforded maximum protection from surface and aerial disturbance. The CRSA is especially vulnerable to impacts associated with increased access to the area, because it would be an attractive destination for a variety of users and nesting raptors are susceptible to disturbance. While the DEIS recognizes the possibility of a road link to the Dalton Highway across State lands and the Colville River, it does little to afford the area protection in the event a publically-funded road is constructed. Under Lease Stipulation/Best Management Practice (LS/BMP) K-1(a) (Colville River) the 1 or 2 mile setback provision "does not apply to intercommunity or other permanent roads constructed with public funds for general transportation purposes." We suggest the 2-mile set-back from the bluff be established for all roads within the CRSA, with the possible exception of a road associated with a crossing of the Colville River, in which case the road would bisect the buffer, impacting a relatively small amount of habitat.

[6.002] To protect the habitats and wildlife resources within the CRSA and to minimize impacts associated with potential development, the Service recommends at least a 2-mile setback from the bluff for all roads and any associated facilities. In addition, we support BMP F-1(a) for Alternatives B-D requiring aircraft "maintain an altitude of at least 1,500 feet above ground level within 0.5 miles of cliffs designated as raptor nesting sites" during designated nesting periods.

Utukok River Uplands Special Area

The approximately 4-million acre Utukok River Uplands Special Area (URUSA) was established in 1977 to protect calving and insect-relief habitat for the Western Arctic Caribou Herd (WAH). The area, located in the southwestern portion of the NPR-A, was not considered in the Northwest or Northeast NPR-A planning efforts. Both Alternatives B and C of the DEIS would add acreage to the URUSA (approximately 3 million acres in Alternative B and 500,000 acres in Alternative C) to expand coverage of important calving and insect-relief habitats used by the WAH.

In order to protect calving areas and insect-relief habitats as well as critical migration corridors for the WAH, the Service supports the adoption of Alternative B in the DEIS. The addition of approximately 3 million acres to the URUSA not only will protect these important habitats but also ensure the integrity of the migration routes used by the WAH. This expansion also affords protection of the subsistence-use areas for North Slope communities (Anaktuvuk Pass, Atqasuk, Wainright, and Point Lay) who depend on seasonal access to the WAH.

Kasegaluk Lagoon Special Area

The northern portion of Kasegaluk Lagoon and the associated wetlands of the Tunalik River were identified as the KLSA in the 2004 ROD for the Northwest NPR-A EIS. The 97,000-acre KLSA encompasses the northern lagoon, barrier islands, and an area 1 mile inland from the lagoon shore. The lagoon and its associated wetlands are areas of high bird concentration and diversity, providing critically important habitats for specific species of waterfowl and shorebirds (Johnson et al. 1993). The area also is seasonally important for molting and fall-staging waterfowl, particularly brant. The villages of Point Lay and Wainwright also use the lagoon extensively for subsistence activities.

Permanent oil and gas facilities are prohibited in the KLSA under Alternative A. Oil and gas leasing while allowed, is currently deferred until 2014. Under Alternatives B and C the lagoon, barrier islands, and area 1 mile inland from the lagoon shore would be unavailable for oil and gas leasing, with no permanent oil and gas facilities allowed. Alternative B in the DEIS also expands the KLSA southward to include 267,000 acres of waterbird and shorebird breeding, molting, and staging habitats. The lands included in the proposed expansion however, will have no specific protections attached to the designation, other than the "maximum protection consistent with exploration of the Reserve." Alternative D affords no protection for the KLSA, opening up the lagoon and barrier islands to oil and gas leasing and development after the 2014

lease deferral. **[6.003]** While the Service endorses the expansion of the KLSA under Alternative B, we question the lack of protective measures associated with the designation. We recommend BLM consider a no-lease with no permanent oil and gas development designation for the Tunalik River wetlands. We fully support the no-lease (and no development) designation of the lagoon and barrier islands in Alternatives B and C.

Proposed Special Areas and Other Designations
Peard Bay and Associated Wetlands

Peard Bay is located along the Chukchi Sea coast east of Wainwright and is the southern terminus of the Barrow Arch. The wetlands extending to the south of Peard Bay, including the Kugrua and Kungok river drainages, provide important shorebird and waterfowl nesting habitat (USFWS unpubl. data; Larned et al. 2002, 2003). The area totaling approximately 951,000 acres also includes habitat identified as high-density nesting areas for spectacled eiders (Audubon 2002; Larned et al. 2002, 2003).

The Service previously has recommended Peard Bay for Special Area designation due to its biologic importance and low oil and gas potential. We are pleased the area is being considered as a Special Area under Alternatives B and C of the current DEIS. The Peard Bay Special Area (PBSA) would encompass 1.6 million acres under Alternative B; 106,000 acres under Alternative C. In Alternative B, Peard Bay and 1mile inland from the shore (approximately 106,000 acres) would be unavailable for oil and gas leasing. The remaining acreage would have no additional protections associated with the Special Area designation. Peard Bay and ¾ mile inland would be unavailable for oil and gas leasing under Alternative C. **[6.004]** While the Service endorses the creation of the PBSA under Alternative B, we question the lack of protective measures for approximately 1.3 million acres of the designated area. We recommend the expansion of the "unavailable for oil and gas leasing" designation of the PBSA to include portions of the Kugrua and Kungok river drainages. These wetlands, extending to the south of Peard Bay, provide important shorebird and waterfowl nesting habitat and have been identified as high-density nesting areas for spectacled eiders (USFWS unpubl. data; Larned et al. 2002, 2003). We fully support the no-lease designation of the lagoon and barrier islands in Alternatives B and C.

Other Coastal Designations

In order to protect marine habitats and shorelines important for marine mammals, waterfowl, and shorebirds within the NPR-A, specific coastal areas (in addition to Kaseguluk Lagoon and Peard Bay) are designated as unavailable for oil and gas leasing under Alternatives B and C. These areas include Elson Lagoon, Dease Inlet, Admiralty Bay, and Wainwright Inlet/Kuk River. Both Alternatives however, would allow for subsurface pipelines under Wainwright Inlet/Kuk River. The Service supports the protections afforded marine habitats and shorelines in Alternatives B and C. In addition, all lands within the NPR-A with valid existing oil and gas leases could be permitted for drilling and infrastructure necessary for exploration, development, production, and abandonment upon completion of appropriate NEPA analysis and subject to permit conditions.

SPECIFIC COMMENTS
Alternatives

The 2012 NPR-A DEIS presents three action alternatives (Alternatives B-D), in addition to a No Action Alternative (Alternative A). Time-limited deferrals offered under the previous RODs are honored under all Alternatives. Valid existing oil and gas lease will be honored and held to the conditions of the ROD under which they were leased. Potential infrastructure in support of Chukchi Sea oil and gas development may be permitted, subject to NEPA compliance, under all Alternatives. No such infrastructure would be allowed however, on lands where oil and gas infrastructure is specifically prohibited under an Alternative.

[6.005] The Service is concerned about the adequacy of the Stipulations and BMPs attached to potential leases under all Alternatives in the DEIS. Discretionary authority to alter or eliminate

Stipulations or BMPs on a case-by-case basis prevents dependable and effective protection of significant resources within the NPR-A. We believe the DEIS could be improved by more clearly defining the Stipulations and BMPs, by identifying the application criteria to be used for determining where and when they will be applied, and finally specifying the circumstances when and how exceptions to the stipulations and BMPs will be authorized. If these additions were made, the Service believes that the apparent contradictions in the DEIS regarding how the Stipulations and BMPs would be applied to additional lease-sales and subsequent permits in the NPR-A would be resolved. Without a clear explanation of how the Stipulations and BMPs are defined and applied to exploration and development activities, it is difficult to assess the alternatives and determine their impacts on the resources of the NPR-A.

Alternative A

Alternative A retains the current management strategies authorized by the RODs for the 2004 Northwest NPR-A EIS and 2008 Northeast NPR-A SEIS as well as the decisions in the 2008 Colville River Special Area Management Plan. Four Special Areas (TLSA, CRSA, KLSA, and the URUSA) are retained unchanged in Alternative A. Teshekpuk Lake and associated islands as well as the entirety of the Southern NPR-A (identified as the URUSA) is unavailable for leasing under Alternative A.

The Service does not support Alternative A. The myriad protocols (Required Operating Procedures, Stipulations, and BMPs) adopted under the various EISs and land-use plans for the NPR-A makes cohesive management of natural resources complex and difficult. In addition, new information regarding wildlife resources as well as hydrocarbon reserves has become available since the 2008 SEIS for the NE NPRA. We support the development of a single management plan, utilizing the latest available data, for the entirety of the NPR-A.

Alternative B

Alternative B allows oil and gas leasing on 11 million acres of the NPR-A. Under this Alternative, the TLSA is expanded to the south and west and is unavailable for oil and gas leasing in its entirety. The URUSA also is unavailable for oil and gas leasing under Alternative B. The KLSA is expanded to the south, to encompass much of the Tunalik River drainage however the designation offers no additional protections and is available for oil and gas development. Kaseguluk Lagoon and barrier islands remain unavailable for oil and gas leasing. Alternative B creates the 1.6 million acre PBSA. The bay and islands (107,000 acres) are unavailable for oil and gas leasing and development, however the remaining 1.5 million acres of the PBSA remain open for oil and gas leasing and development. In addition, the coastal areas including Elson Lagoon, Dease Inlet, Admiralty Bay, and Wainwright Inlet/Kuk River are unavailable for oil and gas leasing and development, with the exception of a potential subsurface pipeline under Wainwright Inlet/Kuk River.

The Service supports much of Alternative B. We feel this alternative offers a balance between opening lands for potential development and the protection of important fish and wildlife habitats. We support the following components of Alternative B and encourage BLM to fully consider them in their ROD for the FEIS.

- Expansion of the TLSA to the west and south encompassing critical caribou calving and movement corridors as well as deep lake habitat considered important for yellow-billed loons;
- Designation of most of the TLSA as unavailable for oil and gas leasing or development to ensure the integrity of these habitats as well as afford full protection to the goose-molting lakes north of Teskekpuk Lake;
- Inclusion of the PBSA, especially the "unavailable for leasing" designation of the bay and islands;
- Continued protection afforded the KLSA, especially the unavailable for leasing designation, for the lagoon and barrier islands;

- Creation of the URUSA and designation as unavailable for oil and gas leasing thereby protecting calving areas, insect-relief habitats and critical migration corridors for the WAH as well as subsistence-use areas for North Slope communities who depend on seasonal access to the WAH.; and
- Designation of Elson Lagoon, Dease Inlet, Admiralty Bay, and Wainwright Inlet/Kuk River as unavailable for oil and gas leasing and development, with the exception of a potential subsurface pipeline under Wainwright Inlet/Kuk River.

[6.006] We also encourage BLM to consider expansion of the "unavailable for oil and gas leasing" designation of the PBSA to include portions of the Kugrua and Kungok river drainages. These wetlands, extending to the south of Peard Bay, provide important shorebird and waterfowl nesting habitat and have been identified as high-density nesting areas for spectacled eiders (USFWS unpubl. data; Larned et al. 2002, 2003).

Alternative C

Alternative C allows oil and gas leasing on 17.9 million acres of the NPR-A. Under this Alternative, the TLSA is expanded slightly to the west and southeast with additional areas managed under Stip K-5a (Teshekpuk Lake Caribou Habitat Area.) The remaining areas of the TLSA, including the goose molting lakes, southern caribou calving areas and caribou movement corridors are managed similarly to current regulations. The area between the TLSA and Dease Inlet, formally a caribou study area, is designated as part of the Teshekpuk Lake Caribou Habitat Area (Stip K-5a) under Alternative C. The PBSA and KLSA are significantly smaller in this alternative than in Alternative B, however both the bay and lagoon, respectively, are unavailable for oil and gas leasing, thereby affording the same level of protection for these areas as in Alternative B. The northern portion of the URUSA is available for oil and gas leasing with regulations imposed under Stip K-12, Western Arctic Herd Habitat Area. Coastal areas, including Elson Lagoon, Dease Inlet, Admiralty Bay, and Wainwright Inlet/Kuk River are unavailable for oil and gas leasing and development, with the exception of a potential subsurface pipeline under Wainwright Inlet/Kuk River, similar to Alternative B.

The main differences between Alternatives B and C pertain to the designation and management of the TLSA and the URUSA. The value to fish, wildlife and subsistence resources of the area surrounding Teshekpuk Lake has long been recognized by resource agencies. Because of the importance of the Teshekpuk Lake area to molting geese, other waterbirds, caribou and subsistence users and the uncertainty surrounding the impacts of climate change on habitats and wildlife populations, the Service supports avoiding oil and gas development in the TLSA. We do not support the "tract by tract" approach to development of the northern TLSA in the current SEIS and offered in Alternative C in the DEIS. Although the acreage per tract is limited to 300 acres and setbacks from lakes are included in the stipulations, the Service continues to have concerns regarding disturbance to molting geese. Our concerns are magnified when habitat impacts related to climate change also are considered. We continue to support an "unavailable" for oil and gas designation for the TLSA. Finally, according to the DEIS the southern NPR-A, including the URUSA, has low potential for oil and gas reserves. The Service encourages the BLM to include the URUSA as unavailable for oil and gas leasing, similar to Alternative B.

While the Service encourages permanent protection for sensitive areas within the NPR-A (most specifically the goose molting lakes and wetlands north of Teshekpuk Lake), we also understand that most of the known oil and gas resources within the NPR-A are thought to be located within the coastal areas between the Colville River Delta and Barrow, especially in the Teshekpuk Lake area. We understand there will be continued interest in oil and gas development in that area. **[6.007]** The Service believes that much of the potential conflict between oil and gas development and the need for resource protection in that sensitive area could be avoided if the oil and resources are well delineated prior to leasing. The U.S. Geologic Survey (USGS) could delineate the extent and availability of oil and gas resources within this area, then information regarding the size, depth, and nature of all the reserves in this area would allow for a

landscape-level development approach. Once the field (or fields) is fully delineated a development plan for the entire area, incorporating only the necessary, appropriate footprint, drilling restrictions, and post-development restoration could be developed. The Service believes it is likely this sensitive area could be developed with relatively few impacts to resources and a minimum of post-development effects. While we continue to advocate for full and permanent protection of the Teshekpuk Lake area the Service encourages BLM to consider this landscape-level approach to development of the Teshekpuk Lake area should Alternative C be selected as the preferred alternative for the NPR-A.

Alternative D

Alternative D opens 22.8 million acres of the NPR-A to oil and gas development. Four Special Areas are included in Alternative D (TLSA, KLSA, CRSA, and URUSA) all of which are available for oil and gas leasing and development. The northern TLSA retains a tract by tract and 300 acre limit development scenario. Oil and gas development would be allowed within Teshekpuk Lake and on its associated islands.

The Service does not support the adoption of Alternative D. The important wildlife values of Teshekpuk Lake and sensitive coastal habitats lack adequate protection under Alternative D. In addition, this alternative would allow a piecemeal approach to development, leaving too many of the environmental decisions to be made at the permitting stage.

USFWS Recommended Alternative

[Preamble 6.008, 009, 010] Overall, the Service recommends Alternative B as the best balance between exploration and development of oil and gas reserves and protection of sensitive fish and wildlife habitats in the NPR-A. In addition, we offer the following suggestions to supplement Alternative B:

[6.008] • To facilitate a landscape-level approach to minimizing impacts associated with infrastructure, the Service recommends a special condition or stipulation be included with the agency preferred alternative. This stipulation should encourage the development of a corridor for infrastructure, including possible dock locations, pipeline routes, and transportation routes associated with offshore development in the Chukchi and Beaufort seas. The stipulation should also require minimal footprint infrastructure, consolidated facilities, and the avoidance of higher-value habitats to the maximum extent possible. To minimize impacts to wildlife resources as development moves westward into the NPR-A, the Service supports a collaborative, landscape-level approach to planning minimum-impact infrastructure.

[6.009] • The development of a science-based research and monitoring plan. The Service recommends and supports BLM's continued active involvement in the Arctic LCC and NSSI. These efforts will facilitate identifying data gaps, and filling important science needs. Climate modeling for a changing environment also will be needed to conserve important resources. The Service encourages BLM to continue collecting baseline data for wildlife species within the NPR-A, especially those that may be impacted by future development, such as waterfowl, shorebirds, and loons. Once adequate baselines are established for particular resources, continued monitoring as development occurs also will be necessary to evaluate both the magnitude of impacts and the effectiveness of mitigation measures. This monitoring should be conducted pre- and post-development and for a sufficient amount of time to make scientifically-based conclusions regarding the impacts of development impacts and mitigation effectiveness. The research and monitoring plan should be central to a peer-reviewed Adaptive Management Strategy that should be completed prior to extensive development in the NPR-A.

[6.010] • Develop a plan of exploration and evaluation of gravel sources or other material suitable for construction of roads and pads necessary for development. Suitable material for fill may be a limiting factor in where facilities can be located within the NPR-A. Identifying the location and extent fill resources within the NPR-A would be a valuable component to a landscape-level approach to development.

[Response to 6.001]
The BLM provides an exception for intercommunity or other permanent roads constructed with public funds for general transportation purposes. This preserves the opportunity to plan, design, and construct public transportation systems to meet the economic, transportation, and public health and safety needs of the State of Alaska and/or communities within the NPR-A. However, the BLM has revised the text in the Final IAP/EIS to encourage minimal use of the setback area for publicly funded roads. The BLM determined not to provide for a strict prohibition, instead favoring to retain all options to provide the greatest overall environmental protection for the full suite of surface resources.

[Response to 6.002]
The Final IAP/EIS provides for a 2-mile setback.

[Response to 6.003]
The IAP/EIS's Alternative B-1 would expand the Special Area to include much of the drainage of the Kasegaluk Lagoon. The BLM has considered a range of protection measures for Special Areas in the range of alternatives depending upon the resource values identified.

[Response to 6.004]
The BLM has considered a range of protection measures for Special Areas in the range of alternatives depending upon the resource values identified.

[Response to 6.005]
The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques. See section 2.3.5 for further discussion of the applicability of stipulations and best management practices.

[Response to 6.006]
The BLM has considered a range of protection measures for Special Areas in the range of alternatives depending upon the resource values identified.

[Response to 6.007]
A map delineating locations of yet-to-be discovered oil and gas accumulations, even for illustrative purposes, would be misleading. Identification of the extent and availability of oil and gas in this area would require an extensive and very expensive exploratory drilling program. The USGS does not have authorization or funding for such an undertaking.

[Response to 6.008]
Best management practice E-5 requires minimization of the development footprint and requires consideration, among other steps, of "sharing facilities with existing development." Various stipulations, including the K stipulations, identify higher-value habitats that are to be avoided.

[Response to 6.009]
The Final IAP/EIS includes additional monitoring and adaptive management requirements.

[Response to 6.010]
Development of "a plan of exploration and evaluation of gravel sources suitable for construction of roads and pads necessary for development" is part of several alternatives, including the preferred alternative. See Chapter 2, Table title "Management actions (other than land allocations, stipulations, and required operating procedures/best management practices)."

COMMUNICATION NUMBER 7
Leslie Holland-Bartels, Regional Executive - Alaska
United States Geological Survey

United States Department of the Interior
US Geological Survey
Office of the Regional Executive – Alaska Area
4210 University Drive
Anchorage, Alaska 99508

May 17, 2012

Subject: USGS Comments on BLM's Integrated Activity Plan/Environmental Impact Statement for the National Petroleum Reserve—Alaska.

USGS has reviewed the draft Integrated Activity Plan/Environment Impact Statement for the National Petroleum Reserve—Alaska and submits the enclosed comments relating to subject areas of expertise, including Geology and Minerals, Water Resources, and Biological Resources. These comments provide new information, correct errors and discrepancies, and not where scientific references are needed to support information cited. For more information please contact Durelle Smith at dpsmith@usgs.gov.

Sincerely,

Leslie Holland-Bartels
Regional Executive-Alaska

Section 3.2.5 Geology and Minerals
General comment: much of the summary geology information is based on older reports; newer information was not incorporated.

p.136. In defining minerals vs. energy minerals, coal is called an energy mineral, but is discussed as a subsection (3.2.5.3) of the Geology and Minerals chapter (section 3.2.5). It should be grouped with the oil and gas resources discussion (3.2.6) and the title of that chapter should be changed to include coal.

[7.001] p. 137. Limestone in NPR-A is not just deep water. Howard Pass quad has much shallow water limestone.

[7.002] p. 137 and 139. There is much controversy about the timing of rifting and the opening of the Arctic Ocean basin. Text states these occurred at the same time during the Brooks Range Orogeny, but many do not accept this. Suggest refer to more recent publications, e.g.:
--Young, L.E., 2004, A geologic framework for mineralization in the western Brooks Range, Alaska: Economic Geology, v. 99, p.1281-1306.
--de Vera et al., 2004, Structure of the Red Dog District, Western Brooks Range, Alaska: Economic Geology, v. 99, p. 1415-1434.

[7.003] p. 138. Figure has errors. The Alapah does not go into Pennsylvanian. The Otuk does go into the Jurassic. Source cited as Meyer et all. (1995). The errors may come from that pub, which is not a USGS pub. Check the geologic map of the Howard Pass quad.
--Dover, J.H., Tailleur, I.L., and Dumoulin, J.A., 2004, Geologic and fossil locality maps of the west-central part of the Howard Pass quadrangle and part of the adjacent Misheguk Mountain quadrangle, western Brooks Range, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-2413, 2 sheets with 25 p. of explanatory text, scale 1:100,000.

[7.004] p. 193, Development of the Arctic Alaska Terrane paragraph. Lisburn Group is more than just the Kuna Formation. Etivluk Group is Permian to Jurassic (not Triassic).

[7.005] p. 140. The mineral terranes of Table 3-3 are from BLM work, not USGS. The paragraph just below the table implies the USGS defined them; we did not. We did do the geologic mapping

of the area, but not for the purpose of "looking specifically for locatable minerals" as stated in this paragraph. The USGS geologic map should definitely be cited here—see citation above for Dover and others, 2004.

[7.006] p. 145. Model numbers from Cox and Singer's Mineral Deposit Models (USGS Bulletin1693) need to be checked. For instance, 22c is a polymetallic vein model, not a breccias model. Sandstone Pb-Zn is model 30a, not 30c.

[7.007] p. 145, 3rd paragraph. Story Creek is described to have grades averaging 18%, etc. Needs a reference.

[7.008] p. 145, 5th paragraph. Pb-Zn deposits are started to me concentrated near thrust-fault contacts. Needs a reference.

[7.009] p. 147, 3rd paragraph. States Lisburne Group contains phosphate beds. Needs a reference.

[7.010] p. 147. Definition of strategic and critical minerals. Needs more up-to-date reference than 1968. Look for the National Academy of Sciences definition.

[7.011] p. 148, 1st paragraph. Reference to upper Mesozoic rocks should be upper Paleozoic rocks.

[7.012] p. 148, 3rd paragraph. Anywhere USGS is said to be the source of information must have a reference.

[7.013] p. 149, 2nd paragraph. Information on Cutaway Basin is out of date. See Schmidt, J.M., Glen, J.M.G., and Morin, R.L., 2009, The Longview/Lakeview barite deposits, southern National Petroleum Reserve of Alaska (NPRA) – potential field models and preliminary size estimates: U.S. Geological Survey Professional Paper 1760-C, 29p. http://pubs.usgs.gov/pp/1760/c/

p. 149-150. Two additional relevant publications to check:
---Slack, J.F., Schmidt, J.M., and Dumoulin, J.A., 2004, Whole-rock geochemical data for Paleozoic sedimentary rocks of the western Brooks Range, Alaska: U.S. Geological Survey Open-File Report 2004- 1371, http://pubs.usgs.gov/of/2004/1371
---Graham, G.E., Deszcz-Pan, M., Abraham, J., and Kelley, K.D., 2001, Investigation of the potential for concealed base-metal mineralization at the Drenchwater Creek Zn-Pb-Ag occurrence, northern Alaska, using geology, reconnaissance geochemistry, and airborne electromagnetic geophysics in Dumoulin, J.A., and Dusel-Bacon, C., eds., Studies by the U.S. Geological Survey in Alaska, 2010: U.S. Geological Survey Professional Paper 1784-B, 19 p., available at http://pubs.usgs.gov/pp/1784/b/.

[7.014] p. 149, 3rd paragraph. Need a reference for sentence "the area lies along a major thrust fault, approximating the northern extent of the most intense tectonic/structural displacement associated with the Brooks Range Orogeny (REF?).

[7.015] p. 150, 2nd paragraph. "recent USGS evaluations" need a reference.

[7.016] p. 150, 4th paragraph. Needs a reference for the Story Creek information—probably Werdon thesis.

[7.017] p. 150, 5th paragraph. States that there are five bedded barite occurrences, but Table 3-5 shows six occurrences. Should update this paragraph with information from Schmidt and others, 2009, listed above.

[7.018] p. 151, 2nd paragraph. Very misleading regarding the deposit estimate. The original estimate was and inferred reserve; this makes it look like it is more solid information. Could definitely get misconstrued by the public. Also, cite reference.

Section 3.2.10 Water Resources

[7.019] General comment: much of the summary hydrology information is based on older reports; newer information was not incorporated.

Section 3.3 Biological Resources

[7.020] p. 295. Marine mammals and Climate Change: states "several ice seal species" have recently been listed or determined warranted for listing under the ESA. This is factually incorrect and does not equate with previous write-up on ringed and bearded seals. These species are not listed or warranted for listing. They are still proposed.

[7.021] p. 308. Legal status of Species: confirm status of yellow-billed loon and timing of listing decision.

[7.022] p. 309. Post-breeding Migration: unpublished USGS data may provide additional information indicating some Kittlitz's murrelets from the Gulf of Alaska cross to the Bering Sea in late summer/fall and migrate north to Chukchi and Beaufort Seas.

[7.023] p. 310. Legal status of Species: confirm status of listing decision on Kittlitz's murrelet.

[7.024] p. 325, 4th paragraph. Confirm status of Interim 4(d) Rule as it has gone to the Federal Register.

[7.025] p. 331, 3rd paragraph. Rode et al. 2007, Regehr et al. 2007, Hunter et al. 2007. These citations are USGS administrative reports—all have been subsequently published in journals;
--Rode, K. D., S. C. Amstrup, and E. V. Regehr. 2010. Reduced body size and cub recruitment in polar bears associated with sea ice decline. Ecological Applications. 20: 768-782.
--Regehr, E. V., C. M. Hunter, H. Caswell, S. C. Amstrup, and I. Stirling. 2009. Survival and breeding of polar bears in the southern Beaufort Sea in relation to sea ice. Journal of Animal Ecology. doi: 10.1111/j.1365-2656.2009.01603.x
--Hunter, C.M., H. Caswell, M.C. Runge, E.V. Regehr, S.C. Amstrup, and I. Stirling. 2010. Climate change threatens polar bear populations: A stochastic demographic analysis. Ecology 91:2883-2897.

[7.026] p. 331, 3rd paragraph. "...the polar bear may be extirpated from much of their range in the next 40 to 75 years." Amstrup et al. 2010 also suggests that mitigating greenhouse gas emissions would improve polar bear persistence.
--Amstrup, S.C., E.T. DeWeaver, D.C. Douglas, B.G. Margot, G.M. Durner, C.M. Bitz, and D.A. Bailey. 2010. Greenhouse gas mitigation can reduce sea-ice loss and increase polar bear persistence. Nature 468:955-958.

[Response to 7.001]
The text has been modified to reflect this information.

[Response to 7.002]
The text has been modified to acknowledge the controversy and newer reference material has been cited.

[Response to 7.003]
The reference for the figure has been updated, however, the commenter's referenced map did not distinguish the Alapah formation. In the figure the Otuk Formation does extend into the lower Jurassic. The Otuk Fm is shown in deVera et. al., as having an erosional unconformity in the Triassic with a direct contact with the Early Cretacious Okpikruak Fm.

[Response to 7.004]
The text has been corrected.

[Response to 7.005]
The text has been modified to reflect this information.

[Response to 7.006]
The text has been modified. The Cox and Singer's Mineral Deposit model 22c was modified with a model from Lefebure and Church I05 (1996) as is stated in the text of the report.

[Response to 7.007]
A reference has been added in the revised text.

[Response to 7.008]
The text has been updated to include a reference.

[Response to 7.009]
References are cited in the Final IAP/EIS.

[Response to 7.010]
The text has been modified and a reference cited.

[Response to 7.011]
The text has been modified to reflect this information.

[Response to 7.012]
The text has been modified to include a reference for the USGS sources.

[Response to 7.013]
The text was updated to reflect the new material from the suggested reference.

[Response to 7.014]
The text has been modified to include a reference.

[Response to 7.015]
The text was modified to include a reference.

[Response to 7.016]
The text has been updated to include a reference.

[Response to 7.017]
The text has been modified to reflect this information.

[Response to 7.018]
The text has been modified and a citation added.

[Response to 7.019]
Streamflow data collected with NPR-A, past and present, was incorporated into Table 3-13 with the latest addition of Prince Creek which was begun in 2009. References used in characterizing the surface water resources were seen as relevant to the issues discussed, despite newer reports

being available for citation. The USGS has contributed greatly to maintaining streamflow data collection within NPR-A and BLM looks forward to having this data summarized in future reports for inclusion into future planning documents.

[Response to 7.020]
According the NMFS OPR, proposed species are those candidate species that were found to warrant listing as either threatened or endangered and were officially proposed as such in a Federal Register notice after the completion of a status review and consideration of other protective conservation measures. Furthermore, a "warranted" finding is prerequisite to a proposal. If a species is found "warranted" after the one-year status review, it leads to either:
(1) a proposal/proposed status. This is the case with bearded and ringed seals. Or
(2) candidate status / a determination of "warranted but precluded from a listing proposal due to higher listing priorities." This is the case with walrus.

The term "warranted" is, therefore, technically correct. The text (Volume 1, Affected Environment, Marine Mammals, Marine Mammals and Climate Change) was modified for clarification to include species recently listed, proposed for listing, or determined warranted for listing.

[Response to 7.021]
Timing of listing decision for 12 month finding is correct as written. An additional action has taken place and the listing priority number has been established as 8 in the October 26, 2011 Federal Register (Vol. 76, No. 207). An update of the listing priority number has been added to the text.

[Response to 7.022]
The BLM author spoke to Tony DeGange at the U.S. Fish and Wildlife Service (USFWS) as he was referred to BLM by the USGS to discuss the comment. Mr. DeGange explained that the comment was meant as a "heads-up" to BLM that currently underway research is showing that some Kittlitz's murrelets are moving into the Bering and Chukchi seas in the fall. Mr. DeGange indicated that adding this preliminary information to the text of the IAPEIS was not warranted at this time. This information will be included in the next USFWS 12-month review of the species and will be made public at that time.

[Response to 7.023]
Timing of listing decision for 12 month finding is correct as written. An additional action has taken place and the listing priority number has been changed from 2 to 8 in the October 26, 2011 Federal Register (Vol. 76, No. 207). An update of the listing priority number has been added to the text.

[Response to 7.024]
The text in the IAP/EIS is correct. Although the USFWS published a Final 4(d) Rule on December 16, 2008, it was vacated by the DC District Court in 2011. The Court ordered that in its place the Interim 4(d) Rule published on May 15, 2008 shall remain in effect until superseded by a new 4(d) Rule for the polar bear to be published in the Federal Register. A new 4(d) Rule has been proposed by the USFWS but it has not yet been published.

[Response to 7.025]
The citation has been modified.

[Response to 7.026]
The text and citation has been modified.

COMMUNICATION NUMBER 8
Frank Hays, Superintendent
Greg Dudgeon, Superintendent
National Park Service

June 15, 2012

United States Department of the Interior
NATIONAL PARK SERVICE
Western Arctic National Parklands and Gates of the Arctic National Park and Preserve
(907) 442-3890 and (907) 457-5752
Bureau of Land Management

NPRA-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

To Whom It May Concern:

In response to the Draft Integrated Activity Plan and Environmental Impact Statement for the National Petroleum Reserve Alaska (NPRA), the National Park Service would like to submit the following comments.

The National Park Service has an interest in "cooperative conservation" beyond Park boundaries, as wildlife, fish, sound, air, and water move freely across the landscape. Noatak National Preserve (NOAT) and Gates of the Arctic National Park and Preserve (GAAR) both border portions of the NPRA and share significant natural and subsistence resources.

The National Park Service Organic Act directs the NPS "[t]o conserve the scenery and the natural and historic objects and wild life therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations" (16 U.S.C. 1). Congress also directs the NPS that "[t]he authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park system and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress" (16 U.S.C. 1a-l).

Both NOAT and GAAR contain valuable geological and natural resources and were established for their scenic treasures and wildlife populations as described in their enabling legislations. NOAT was established: "To maintain the environmental integrity of the Noatak River and adjacent uplands within the preserve in such a manner as to assure the continuation of geological and biological processes unimpaired by adverse human activity; to protect habitat for, and populations of, fish and wildlife, including but not limited to caribou, grizzly bears, Dall sheep, moose, wolves, and for waterfowl, raptors, and other species of birds; ... and in a manner consistent with the foregoing," to provide opportunities for scientific research" (ANILCA Title 2 8(a)). GAAR was established: "To maintain the wild and undeveloped character of the area, including opportunities for visitors to experience solitude, and the natural environmental integrity and scenic beauty of the mountains, forelands, rivers, lakes, and other natural features; to provide continued opportunities, including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities, and to protect habitat for and the populations of, fish and wildlife, including, but not limited to, caribou, grizzly bears, Dall sheep, moose, wolves, and raptorial birds. Subsistence uses by local residents shall be permitted in the park, where such uses are traditional..."" (ANILCA Title 2 4(a)).

Caribou

The northern areas of NOAT and GAAR are ecologically important areas for the Western Arctic Caribou Herd (WAH), Teshekpuk Caribou Herd (TCH), and the Central Arctic Caribou Herd. These parklands have some of the most intact, contiguous, and unaltered ecosystems in the world. Oil and gas development could exert negative effects on these herds and other natural resources, including bird populations, marine mammals, anadromous fish, and arctic plant communities through habitat fragmentation, more human access, and altered predation patterns.

Caribou are a critically important subsistence food resource for residents of northwest Alaska – over 10,000 are harvested annually for subsistence purposes. Proposed actions contained within the IAP/EIS could significantly impact calving grounds of the WAH and TCH. Further, potential barriers (e.g., roads and pipelines) and disturbances could hinder well-documented east-west movements from the calving grounds to critical insect relief areas on the Chukchi Sea coast and west-east movements from the insect relief areas to summer foraging range. Summer range may be of particular importance to the ecology of caribou as this is the season that they regain weight lost over the winter. Also, pregnancy rates are positively correlated with fall body weight. Thus, development of the NPRA has the potential to have population-level impacts on caribou herds that spend significant portions of time within NPS-managed lands. Along with potential population-level impacts, alternatives discussed in the IAP/EIS could also alter the timing and location of the fall migration. Local subsistence-based residents believe that the location and timing of caribou migration may be negatively affected by disturbances such as unnatural sounds and/or human activities of short or long duration within the path of migrating caribou. **[8.001]** Of particular concern to residents is the undisturbed southern movement of caribou at the beginning of the fall migration in August and September. These early migrating caribou bands may have an important role in providing behavioral and biological cues to caribou that will later follow these same geographic routes throughout the fall migration period. Disturbances, such as unnatural sounds (e.g., aircraft, vehicle, drill equipment) and human activity (e.g., camp noises), to caribou groups should temporarily cease until groups move away from industrial activity areas. We recommend the adoption of mitigation measures, similar to those provided by the Northwest Arctic Borough permits pertaining to project activities in the presence of caribou on Borough lands, for the NPRA.

Landscape Ecology and Air Quality

Invasive terrestrial and aquatic plants have the potential to significantly alter the landscape of northwest Alaska and forage upon which caribou and, hence, local people depend. This region is fortunate to not yet host large numbers of species introduced by humans. However, some invasive species do occur along local airstrips that serve as vectors for remote backcountry. **[8.002]** Increased development should include mitigation to protect against the spread of invasive species.

[8.003] Industrial development in NPRA would entail a large quantity of air emissions, most notably sulfur oxides (SOx) and nitrogen oxides (NOx). Lichen communities are among the most sensitive receptors on the planet to N, S, and heavy metals air pollution. Lichens and bryophytes obtain all of their mineral nutrition from the atmosphere in the form of wet and dry deposition. NOAT and GAAR are unique in that 75% of their flora is composed of nonvascular plants (i.e., lichens and bryophytes). Experience in other industrialized parts of the world has shown that most sensitive lichen species disappear following development and that in intermediate cases a large number of sensitive lichens are replaced by a small number of nitrogen-tolerant taxa. Lichen communities are already facing threats from climate induced shrub increase which smother lichens. Coupled with air pollution, lichen decline on NPS lands could result in significant damage to caribou, muskox and reindeer winter range. We encourage permitting standards which minimize effusions of sulfur oxides and nitrogen oxides under any development scenario.

Subsistence

Additionally, we have significant concerns with elements of the alternatives, and particularly Alternative D, to have detrimental subsistence impacts. As you state in your 810 analysis Alternative D may result in significant restriction to subsistence uses for the community of Anaktuvuk Pass as well as other North Slope communities. Anaktuvuk Pass is a traditional Nunamiut Eskimo community located within the boundaries of Gates of the Arctic National Park and is very dependent upon traditional caribou migrations through their homelands in order to continue a traditional way of life through subsistence activities. As stated in Alternative D and others, implementation could result in a scenario where a multitude of minor impacts to subsistence species could occur in many locations within the NPR-A resulting in an overall impact to subsistence systems as a result of substantial widespread disturbance. Subsistence uses by communities that depend upon the WAH and the TCH such as Anaktuvuk Pass and many communities south of the Brooks Range Mountains, depend upon traditional migrations of caribou as the basis of their subsistence economy and cultures. Alternatives that could potentially threaten opportunities for these communities to continue subsistence activities as envisioned in Title VIII of ANILCA should be avoided in order to comply with the requirements and intent of this statute.

[8.004] The analysis of cumulative impacts should encompass the geographic scope of affected resources. Thus, since WAH and TCH have the potentially to be negatively impacted by alternatives discussed, the scope of the cumulative impact analysis needs to cover the entire range of these herds. This includes, but is not limited to: the Umiat, Ambler and Nome road projects and mining projects such as the Red Dog expansion, Lik deposit, Squirrel River area, and the Seward Peninsula.

Summary

For these reasons, we prefer selection of Alternative B, presented in the IAP/EIS. The development alternatives described in Alternative B are the most compatible with effectively implementing our legislated mandate for the natural and subsistence resources which we share. We also encourage that appropriate mitigation measures be implemented with any future permitting to minimize impacts to our shared resources.

Thank you for your time and consideration. Please contact us you have any questions.

Frank R. Hays
Superintendent
Noatak National Preserve

Greg Dudgeon
Superintendent
Gates of the Arctic National Park and Preserve

[Response to 8.001]
The BLM has included extensive lease stipulations and best management practices to protecting migrating caribou and their habitat. See, particularly, the K-5 and K-12 stipulations. Moreover, the preferred alternative provides extensive protection for the southern part of the NPR-A through which caribou move during fall migration.

[Response to 8.002]
A new mitigation measure for this purpose was proposed in each of the four alternatives of the Draft IAP/EIS and is proposed as a best management practice in the preferred alternative.

[Response to 8.003]
Impacts to air quality are considered and analyzed in the IAP/EIS and protections are included in the alternatives, including the preferred alternative. In particular, see best management practices A-9 and A-10. Moreover, Alaska's Department of Environmental Conservation develops, monitors, and ensures compliance with air quality standards.

[Response to 8.004]
The cumulative impact analysis encompasses where applicable the full geographic scope of the Western Arctic Caribou Herd and the Teshekpuk Caribou Herd. Thus impacts to those herds and related impacts to subsistence are analyzed. In addition, in cases in which development proposals are reasonably foreseeable, the cumulative impact analysis encompasses those proposals. For example, impacts from potential roads to Umiat and to the Ambler mining district are considered as is mining at Red Dog. In contrast, the road to Nome is not far enough along in the planning stages to be considered at this point.

COMMUNICATION NUMBER 9
Christine B. Reichgott,
Environmental Review and Sediments Management Unit, Manager
U.S. Environmental Protection Agency

June 8, 2012

Bud C. Cribley, State Director
Bureau of Land Management Alaska State Office
222 West Seventh Avenue, #13
Anchorage, Alaska 99513-7504

Re: EPA comments on the Draft Environmental Impact Statement for the Bureau of Land Management National Petroleum Reserve-Alaska (EPA Project # 10-045-BLM).

Dear Mr. Cribley:

Thank you for the opportunity to review the Draft Environmental Impact Statement (EIS) for the Bureau of Land Management (BLM) National Petroleum Reserve-Alaska (NPR-A) Integrated Activity Plan (IAP) in the North Slope Borough, Alaska (CEQ # 20120091). We have reviewed the EIS in accordance with our responsibilities under National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309 specifically directs the EPA to review and comment in writing on the environmental impacts associated with all major federal actions as well as the adequacy of the EIS in meeting procedural and public disclosure requirements of NEPA.

We have given the EIS an overall rating of EC-2 (Environmental Concerns-Insufficient Information), applicable to all alternatives. Our rating is based on concerns about potential impacts to water quality, air quality, habitat and subsistence, and a need for additional information regarding air modeling and differential setbacks from water bodies. While we believe that the information and level of detail in the document is generally adequate overall, **[9.001]** we recommend that additional information, consistent with the commitments outlined in the June 2011 Memorandum of Understanding for Air Quality Analysis and Mitigation for Oil and Gas Activities on Federal Lands Air Quality, be included in the Final EIS. A description of our rating system is enclosed.

Based on the information in the Draft EIS, we believe Alternative B appears to be environmentally preferable compared to the other action alternatives. This conclusion is based on the alternative's greater protections for surface resources, including that of lands on which non-subsistence infrastructure is currently prohibited. The new or enlarged Special Areas provide additional caribou calving and insect relief acreage, as well as habitat for bird molting, staging and migration.

We appreciate the tremendous effort of the BLM to produce a comprehensive yet succinct document that clearly articulates the anticipated impacts of the proposed project. We believe that the visual graphics, quantitative impact tables and appendices are extremely useful to the reader, as is the EIS project website. Finally, we commend the BLM's extensive effort to involve and consult with North Slope communities and stakeholders. This has resulted in a document that we believe is responsive to local concerns and needs. We offer the attached comments to inform the BLM of issues that the EPA believes warrant additional consideration in the NEPA analysis of the Final EIS for the project.

Air Quality

As stated above, the **[9.002]** Draft EIS does not include the appropriate information regarding air quality analysis as outlined by the air quality MOU signed last year by the EPA, the Department of the Interior and the Department of Agriculture. For consistency with the MOU, we believe the Draft EIS should have included air quality modeling to assess impacts to air

quality and "Air Quality Related Values" from the proposed action. Therefore, we strongly recommend that this analysis be completed and incorporated into the Final EIS. We look forward to working with you on this issue for this action as well as future projects in NPR-A.

Water Quality

While we do not have substantial concerns regarding potential impacts to water quality based on the information presented in the Draft EIS, **[9.003]** we would appreciate additional information regarding the decisions for the different setbacks for different rivers as well as the coastal areas in NPR-A as identified in Least Stipulations/Best Management Practices K-1and K-6.

Clean Water Act Section 404(b)(1) Analysis

We understand that for a broad management plan such as this one, it is not yet appropriate or feasible to develop a draft 404(b)(1) analysis. However, we recommend that future NEPA documents for specific projects in the NPR-A include such an analysis in compliance with the Clean Water Section 404(b)(1) Guidelines when those specific projects involve a discharge of dredged or fill material into waters of the United States. By including this analysis in project-specific EISs, permitting decisions under Section 404 can be coordinated with other agency decisions, including the consideration of whether the proposed discharge would represent the least environmentally damaging practicable alternative.

EPA Regulatory Role

[9.004] In Section 1.9, the EIS discusses the current status of the transfer of the National Pollutant Discharge Elimination System (NPDES) program to the State of Alaska. Based on a recent agreement between the EPA and the Alaska Department of Environmental Conservation, we recommend this paragraph be revised to state that the transfer of Phase IV will be completed on October 31, 2012. For more information about program transfer, please see the Alaska Pollutant Discharge Elimination System website at http://dec.alaska.gov/water/APDES/phaseIVextention.html. Please revise "Pollution" to "Pollutant" wherever NPDES is referenced in the document.

Also in this section, **[9.005]** the EIS references "other Clean Water Act mandated permits" and lists oil discharge prevention and contingency plans as well as underground injection authorizations. We recommend that this statement be revised to reflect that, in addition to the requirements under the CWA, oil discharge and contingency planning is also mandated by the Oil Pollution Act of 1990, and underground injection control (UIC) is mandated by the Safe Water Drinking Act of 1974, as amended in 1986 and 1996. The EIS may also specify that EPA issues Class I UIC permits (industrial hazardous wastes) and the Alaska Oil and Gas Conservation Commission issues Class II permits (oil and gas-related wastes).

Reasonably Foreseeable Future Activities

We recommend that coordination with U.S. Army Corps of Engineers continue to ensure that the most current alternatives for the Foothills West project are reflected in the NPR-A Final EIS, particularly if an alternative from existing Meltwater infrastructure is included (Section 4.7.3.2). Such an alignment could result in an alternative access corridor into other areas of the Northeast NPR-A in the future, including a Colville River crossing.

Mitigation and Monitoring

We appreciate the discussion of and distinction between the stipulations and the required operating procedures or best management practices, which are discussed in Chapter 2, and the additional mitigation measures, which are identified in Chapter 4. Separating these types of mitigation is helpful to understand what will be required of lessees and what may be required under the Record of Decision. **[9.006]** We recommend that additional information be included in the Final EIS to clearly distinguish between those mitigation measures discussed in Chapter 4 that BLM has the authority to implement, and those of which it cannot and thus would require

the involvement of other agencies to execute them. We believe this information would be consistent with CEQ's Guidance, Appropriate Use of Mitigation and Monitoring and Appropriate Use of Findings of No Significant Impact, issued in January 2011 (http://ceq.hss.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf). Finally, and also in line with the mitigation guidance, **[9.007]** we recommend that a draft adaptive management plan be identified and included in the Final EIS to monitor and ensure the success of future mitigation efforts.

Again, we appreciate the opportunity to offer comments on the Draft EIS and look forward to continuing to work with the BLM on addressing the issues we have identified for the Final EIS, as well as implementation of the air quality MOU. Please contact me at (206) 553-1601 or by electronic mail at reichgott.christine@epa.gov or you may contact Jennifer Curtis of my staff in Anchorage at (907) 271-6324 or curtis.jennifer@epa.gov with any questions you have regarding our comments.

Sincerely,

Christine B. Reichgott, Manager
Environmental Review and Sediments Management Unit

EC – Environmental Concerns
EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.
Category 2 – Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.
* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

[Response to 9.001]
For a discussion of quantitative analysis of air impacts, see Appendix H.

[Response to 9.002]
For a discussion of quantitative analysis of air impacts, see Appendix H.

[Response to 9.003]
The varying setbacks reflect in part the assessment of different sensitivity to development activities along different rivers, river segments, and the coast. For example, setback from river banks known to have important raptor nesting habitat or, in the case of the preferred alternative, that are of substantial importance for subsistence commonly have 1-mile, rather than 1/2-mile setbacks. The preferred alternative also has modified the point from which the setback is measured to more uniformly refer to the river's bank, rather than the center line. The IAP/EIS has been edited in several areas to add more clarity.

[Response to 9.004]
Sec. 1.9 has been edited to reflect the transfer date.

[Response to 9.005]
The requirements listed by EPA are covered, along with others, in Appendix B, to which section 1.9 refers.

[Response to 9.006]
The BLM proposes to adopt some mitigation measures or portions of mitigation measures in the preferred alternative. It considers these mitigation measures to be within its authority and mission as a land manager.

[Response to 9.007]
The Final IAP/EIS includes additional discussion of adaptive management measures, particularly monitoring.

COMMUNICATION NUMBER 11
Alex Whiting, Environmental Specialist
Native Village of Kotzebue

Native Village of Kotzebue
Kotzebue IRA

RE: NPR-A Draft IAP/EIS
The Native Village of Kotzebue (Tribe) has reviewed the NPR-A Draft IAP/EIS. It is a very large undertaking creating a single leasing plan for an area as large as most States. We have a multitude of concerns related to the impacts associated with the development of oil and gas from the Chukchi coastline across the entire NPR-A. In general, the Tribe supports excluding the southwest portion of the lease area in a manner that precludes development within the entire calving ground of the Western Arctic Caribou Herd (WAH) and the adjacent insect relief areas.

Specifically, **[11.001]** the Tribe would like to see more direct discussion of likely impacts from widespread road and pipeline development on caribou habitat fragmentation. This leasing plan, even under the most conservative approach, in concert with Roads to Resources and other development projects adjacent to NPR-A, will begin to box up much of the WAH range. However fragmentation of habitat is largely ignored in the discussions related to impacts on caribou with 3 brief indirect exceptions:

1. "...functional loss of habitat would be greater than the number of acres indicated as the actual development footprint."
2. "Any development...could result in greater impacts to caribou and perhaps other mammals and their habitats than predicted based solely on the amount of area disturbed." and
3. "These and other stresses accumulate because they interact and are repeated with each new lease sale, EIS, development proposal, and facility expansion."

While this speaks to expanded loss of acreage (i.e. habitat) over the amount of the actual acreage permitted for development and not habitat fragmentation per se, it at least recognizes impacts beyond just permitted acreage. Fragmentation discussions of any kind are limited and from our reading appeared only a couple of times with regard to short eared owls, sandpipers, polar bears, geomorphology, and plant fragments in caribou fecal pellets. More discussion of fragmentation of habitat and its implications for caribou is necessary. The Tribe previously raised this concern in our formal scoping comments to the BLM. If BLM decided that this topic was not relevant for inclusion in the IAP/EIS, this decision should be explained in the Final IAP/EIS.

[11.002] The discussion regarding protections afforded by the Utukok River Uplands Special Area (URUSA) is not entirely clear. This material is scattered throughout the document with what appear to be contradictory statements and comparisons to Alternatives C and D. To make the distinctions clearer in the Final IAP/EIS we suggest you include maps showing the WAH calving grounds and insect relief habitat as the underlayment with the various Alternatives superimposed that illustrate area borders. These maps should be annotated to describe the protections afforded by each of the Alternatives.

We also recommend that the protection offered by the URUSA under any of the alternatives explicitly and implicitly speak to the critical nature of this area for the WAH (e.g., "Oil and gas development has altered the distribution of female caribou during the calving season and interfered with caribou movements between inland feeding areas and coastal insect-relief areas. Female caribou may also experience lower parturition rates when in close proximity to oil field development." These protections for the WAH are needed regardless of which alternative leasing plan is eventually adopted. In other words, regardless of what human activity occurs, the needs of the WAH are exactly the same going forward. This argues for implementing the same protections under any of the Alternatives. This is especially important if a Special Area designation does not provide specific protections, but, instead, highlights areas and resources for

which the BLM will extend "maximum protection" consistent with exploration of the Reserve. There appears to be no convincing reason why the Utukok River Uplands Special Area could not be the larger size proposed in Alternative B for all the Alternatives.

For example, take the following statement: "For the Western Arctic Caribou Herd, Alternative A would result in fewer impacts than Alternatives B, C, and D because the unplanned portion of the NPR-A, including all of the prime calving and insect relief areas of the Western Arctic Caribou Herd, would be unavailable for leasing" From our perspective it is unwise to reduce protection for the WAH calving and insect relief areas. If anything, these protective measures should be strengthened and enlarged from the current Alternative A. In some ways it seems as if it is a poison pill approach, where tradeoffs need to be made if more protection is to be afforded the WAH critical habitat. We strongly disagree with this approach. The large Alternative B URUSA area should be extended to all of the Alternatives.

The southwest NPR-A is critical to the future of the WAH and so it is also critical to the future of our tribal members, especially as it relates to food security and cultural well-being. The development of NPR-A has the potential to greatly disrupt the conditions that create the critical habitat depended on by the WAH. With so many unknowns' related to all potential impacts—from climate change to over-flights to pollution—it behooves the government to take a conservative approach going forward to maximize protections and minimize unintended consequences.

We hope you take our comments under consideration and reassess the varying level of protections of the Utukok River uplands and whether it is really appropriate to have options of lesser protections instead of a single all-encompassing protective standard.

Thank you for your consideration.

Alex Whiting
Environmental Specialist

[Response to 11.001]
The IAP/EIS analyzes the impacts of roads, pipelines and other infrastructure on caribou from the perspectives of both disturbance and habitat loss. The BLM considers caribou habitat loss a more significant potential impact than habitat fragmentation, although disturbance effects may be most important overall. Although sometimes delayed or deflected, caribou can and do cross over roads and under pipelines. In addition, they sometimes stand on roads or under pipelines to avoid insects. Thus these structures do not represent complete barriers to caribou and can be considered as a form of insect relief habitat. As such, other habitat on either side of these structures is not "fragmented."

[Response to 11.002]
While the URUSA is discussed throughout the IAP/EIS, a concise list of protections provided by leasing stipulations can be found in Table 2 3. Alternative stipulations and required operating procedures/best management practices. See in particular, stipulation K-12. For the preferred alternative, the most important protection are classifying much of the southwestern NPR-A as unavailable for oil and gas leasing and a prohibition of nearly all non-subsistence infrastructure. See the discussion at section 2.3.2.2 and referenced maps for Alternative B-2.

COMMUNICATION NUMBER 12
Roy Ashenfelter, Chair
Western Arctic Caribou Working Group

June 1, 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99501

Dear NPRA Planning Team:

On behalf of the Western Arctic Caribou Herd Working Group, I submit the following comments on the Draft IAP/EIS (Draft Plan) for the National Petroleum Reserve-Alaska (NPRA).

The Western Arctic Caribou Herd Working Group (Working Group) was created in 1997 and consists of a broad range of stakeholders interested in using and conserving the Western Arctic Caribou Herd. The goal of the Working Group is to work cooperatively with each other and state and federal resource management agencies "to ensure the long-term conservation of the Western Arctic Caribou Herd and the ecosystem on which it depends, to maintain traditional and other uses for the benefit of all people now and in the future."

We provided scoping comments dated September 30, 2010, and asked the Bureau of Land Management (BLM) to use those comments in developing a Draft Plan that would help us evaluate how caribou habitat and subsistence would be protected under the various alternatives. We appreciate the consideration of the Western Arctic Herd and of subsistence use and users in the Draft Plan. We also strongly recommend that BIM provide permanent protection for all caribou migration corridors and all seasonal core habitats for both the Western Arctic Herd and Teshekpuk Caribou Herd. Habitat protection is essential to maintain caribou herds, and is the driving mission of the Working Group.

We continue to support permanent protection of caribou calving, insect relief habitat and migration corridors within the NPRA.

Specifically, we request that no resource extraction activities be allowed within key calving and insect relief habitats (Figure 1) or across migration routes (collectively referred to as critical habitat henceforth; Figure 2) for the Western Arctic Herd, as well as the Teshekpuk Lake Herd. For the Western Arctic Herd, most of this critical habitat [1] is within the Utukok River Uplands Special Area and Colville River Special Area as designated as unavailable for leasing under Alternative B [2]. The boundaries of these combined special areas under Alternative B also encompass the primary subsistence use areas [3] within NPRA for North Slope communities who depend on the Western Arctic Herd, including Anaktuvuk Pass, Atqasuk, Wainright and Point Lay. In addition to not allowing oil and gas development or mining in this area, we request that this area be protected from roads that would disrupt caribou migration and pipelines that would be associated with activity that would disturb the herd, including high levels of aircraft use. We support protection of the Teshekpuk Lake Herd critical habitat and subsistence use areas in the Teshekpuk Lake Special Area, as delineated in Alternative B, for the same reasons. [4]

We support Alternative B in the Draft Plan as the best management alternative for the Western Arctic Herd. Until permanent protection of critical caribou habitat and subsistence use can be achieved, it is important that BLM ensures the integrity of the Utukok River Uplands Special Area/Colville River Special Area caribou critical habitat. Our support and recommendations are as follows:

I. We support no leasing in caribou critical habitat as provided under Alternative B, including the Utukok River Uplands, Colville River and Teshekpuk Lake Special Areas (Figure 1).

II. We recommend that Best Management Practices be revised to state that roads are explicitly prohibited in the caribou critical habitat areas.

III. **[12.001]** We requested in our scoping comments that exception clauses not be permitted. Therefore, we recommend that Stipulation K-12 be revised to reflect this. For example, major construction activities should not be permitted, without exception, during the period from May 20 through August 20 in caribou critical habitat to avoid disturbing the caribou.

IV. All proposals for infrastructure development in caribou critical habitat should be governed by Best Management Practices/Stipulations outlined in the Draft Plan regardless of whether the project originates in NPRA or outside of NPRA.

V. **[12.002]** The Working Group includes representatives for all communities that rely on the herd, and should therefore be named as a consultant and participant in any study undertaken or workshops convened to evaluate proposed development under Stipulation K-12a.

VI. Traditional Ecological Knowledge (TEK) needs to be included in the planning process. We recommend in your revision of the draft plan that BLM work with Tribes and other Alaska native interests to incorporate TEK in order to improve management of vital customary and traditional use resources.

We strongly oppose Alternative C for managing caribou critical habitat and subsistence use. Under Alternative C, only the southernmost portion of the Western Arctic Herd's critical insect relief and calving habitat would be protected from oil and gas leasing. The rest would be subject to stipulation K-12 which attempts to minimize disturbance of caribou, but which would still allow development in caribou critical habitat and important subsistence hunting areas. Further, Alternative C does not protect the Teshekpuk Lake Herd calving areas from leasing.

The Working Group opposes Alternative D. Alternative 0 would open the entire NPR-A to future leasing and offers no reliable protection from leasing in critical calving, insect relief and summer migration range of the Western Arctic Herd. Under Alternative D, the BLM would manage the Western Arctic Herd calving grounds by stipulations that may not protect the herd from disturbance. As stated in the Draft Plan, "The lower level of protection for the Western Arctic Herd under Alternative D, particularly the potential for development near the calving grounds of the Western Arctic Herd, decreases the security of the over 40 Alaskan communities that depend on those animals [5]." The Draft Plan does not analyze the impacts of oil and gas leasing on the Western Arctic Herd in the Utukok River Uplands Special Area and western end of the Colville River Special Area because of the uncertainty that oil and gas resources would be found there. Therefore, under Alternative D, if oil and gas resources were found in these areas, then a new plan would be needed, potentially resulting in even less protection than there is now.

We find that Alternative A is insufficient for achieving the goals of protecting critical caribou habitat and subsistence use. Although Alternative A does not allow leasing in the key calving and insect relief areas of the Western Arctic Herd, it would allow leasing in the calving grounds around Teshekpuk Lake. Alternative A also does not have the protective provisions of Stipulation K-12 that are in Alternative B. Although oil and gas activities would not be allowed in Western Arctic Herd critical habitat under Alternative A, there is also a need to minimize disturbance of caribou and hindrance to their movement from developments that might occur near this area (including associated roads, pipelines and aircraft use).

[12.003] Finally, the Working Group is concerned that, if the boundaries of Special Areas fall within the core caribou calving and insect relief areas, there may not be enough space for caribou to adapt their use and movement as climate change and development impact the herd. The Working Group is interested in knowing more about what areas might be important to the Western Arctic Herd in the future [6] and would like the plan to address how the BLM will work with other researchers to understand how climate change is affecting the caribou and their habitat.

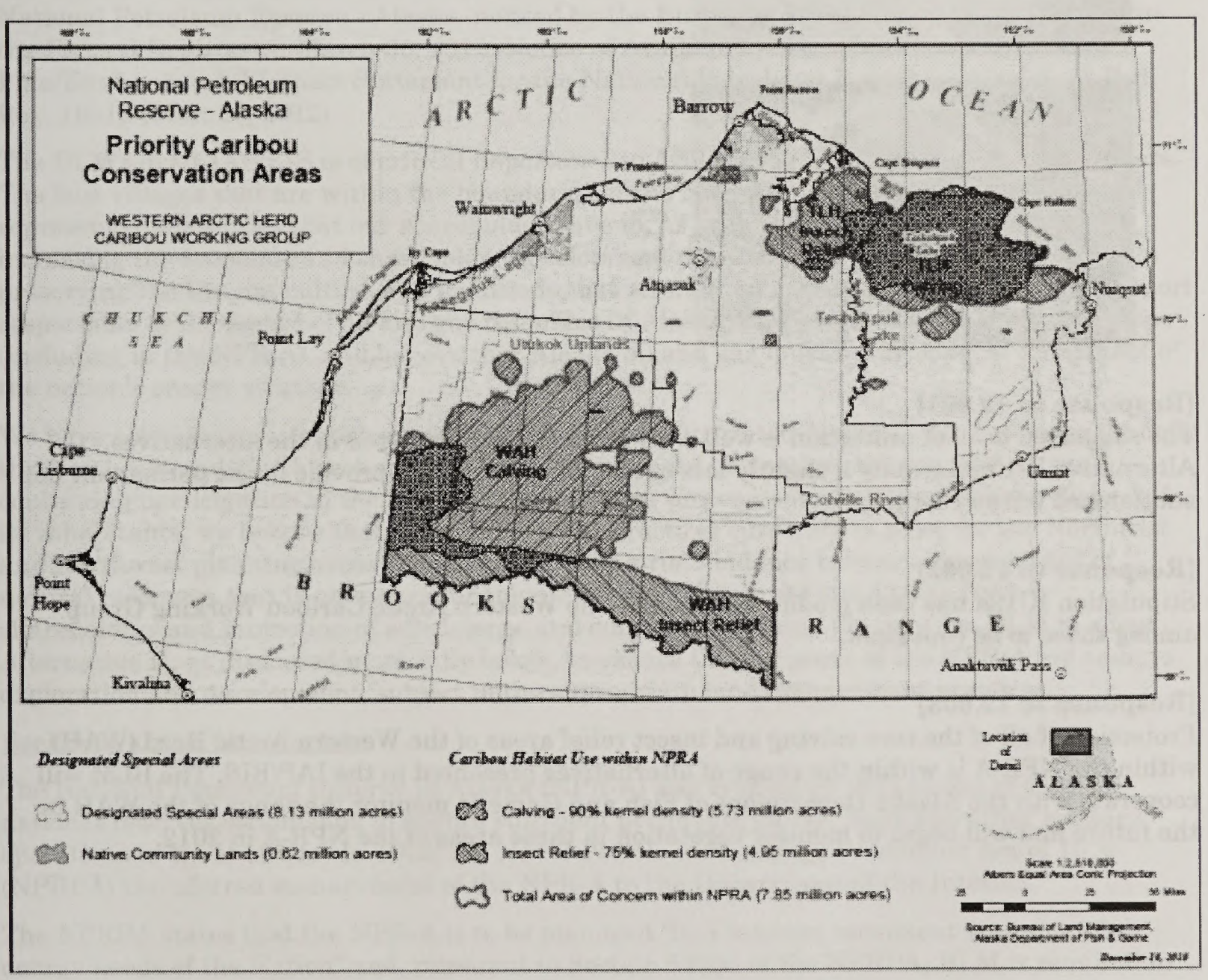
In closing, we remind you that 92 villages are represented by resolutions passed by their tribal governments and native associations stating their support for protecting caribou and other wildlife and their habitat in NPRA. The Working Group asks that you strongly consider the importance of protecting caribou and their critical habitat to our member communities, and select Alternative B as the preferred alternative.

On behalf of the Working Group,

Roy Ashenfelter, Chair

cc: Western Arctic Caribou Herd Working Group Members & Alternates

1 Draft Plan Maps 3.3.6-4,8, 9
2 Draft Plan Map 2-2
3 Draft Plan Maps 3.4.3-1,2,3,7,8
4 Draft Plan Map 2-2
5 Draft Plan, Appendix A, p. 24
6 Western Arctic Caribou Herd Management Plan



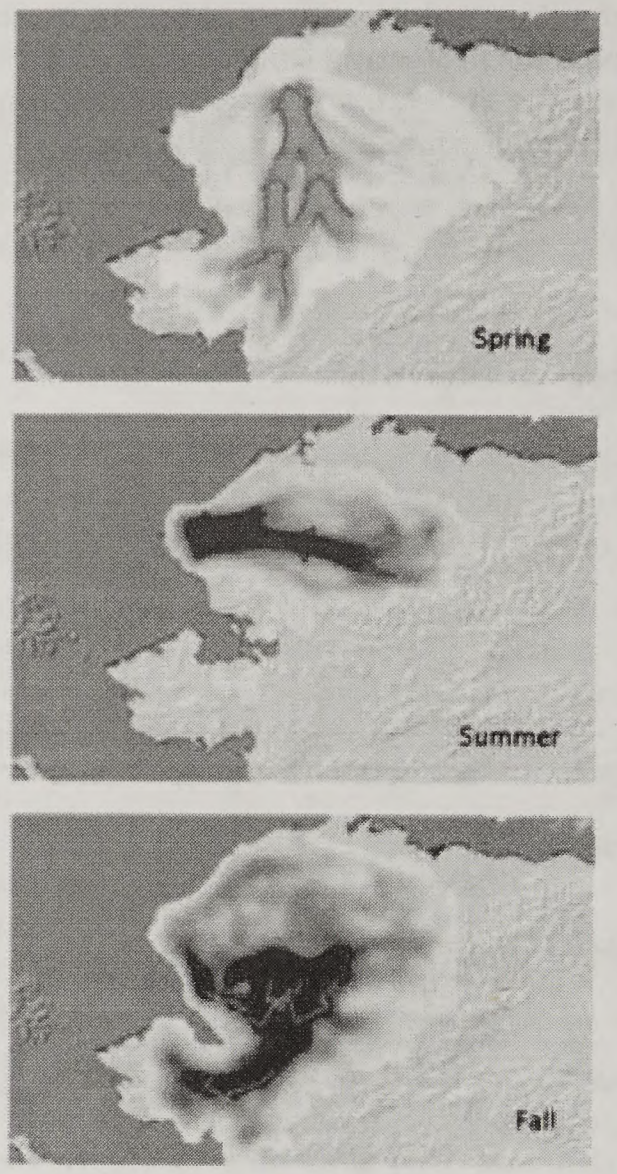


Figure 2. Seasonal movement corridors for the Western Arctic Caribou Herd derived from satellite tracking collars fitted to 160 female caribou. Prepared by Melanie Smith (Audubon Alaska) and Jim Dau (ADFG).

[Response to 12.001]
The suggested level of protection is well within the range considered in the alternatives. Alternative B-1 and to only a slightly less extent Alternative B-2 provide for no permanent non-subsistence infrastructure.

[Response to 12.002]
Stipulation K-12a has been modified to include the Western Arctic Caribou Working Group among those to be consulted.

[Response to 12.003]
Protection of all of the core calving and insect relief areas of the Western Arctic Herd (WAH) within the NPR-A is within the range of alternatives presented in the IAP/EIS. The BLM will cooperate with the Alaska Department of Fish and Game to monitor the range of the WAH in the future and will begin to monitor vegetation in these areas of the NPR-A in 2012.

COMMUNICATION NUMBER 13
Richard Glenn, Executive Vice-President Lands and Natural Resources
Arctic Slope Regional Corporation

June 15, 2012

NPR-A IAP/EIS Comments
AECOM Project office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

Re: Draft Integrated Activity Plan/Environmental Impact Statement for the National Petroleum Reserve – Alaska

Dear IAP/EIS Docket:

Arctic Slope Regional Corporation ("ASRC") hereby submits the following comments in response to the Draft Integrated Activity Plan/Environmental Impact Statement (Draft IAP/EIS) for the National Petroleum Reserve - Alaska, noticed by the Bureau of Land Management ("BLM") in the Federal Register on March 30, 2012. Notice of Availability -- Draft Integrated Activity Plan/Environmental Impact Statement for the National Petroleum Reserve -- Alaska, 77 Fed. Reg. 19318 (Mar. 30, 2012).

The BLM's draft IAP/EIS is of critical importance to ASRC and its Alaska Native shareholders. The four villages that are within the boundaries of the NPR-A are within ASRC's region and represent communities that our shareholders live in; as such, ASRC is committed both to increasing the economic and shareholder development opportunities within our region, and to preserving the Iñupiat culture and traditions that strengthen our shareholders. We also support responsible development of oil and gas resources in Alaska, and specifically on the North Slope (including in the NPR-A), and believe that Alaska oil and gas must be an integral component of the nation's energy strategy.

We have actively participated in the previous NPR-A Integrated Activity Plan processes for both the Northeast and Northwest areas of the NPR-A. Based on that experience, and on our continuing participation in the myriad land planning processes impacting the North Slope and its inhabitants, we believe that the management practices currently in place for the Northeast and Northwest planning areas represent the appropriate balance between development of natural resources that is necessary for the continued wellbeing of our Alaska Native shareholders and protection of subsistence and cultural resources. We urge the BLM to adopt Alternative D, as discussed more fully below, to ensure that all areas of the NPR-A are open to exploration and development, subject to the appropriate land management practices.

Background and Introduction

The National Petroleum Reserve in Alaska (NPR-A) was created in 1923 as one of several national reserves established to ensure sufficient petroleum for the Navy and other military operations in times of war. In 1976, the Naval Petroleum Reserves Production Act of 1976 (NPRPA) transferred management of the NPR-A to the Department of the Interior.

The NPRPA states that the NPR-A is to be managed "in a manner consistent with the total energy needs of the Nation" and, pursuant to Section 6505a of the NPRPA, BLM is required to conduct oil and gas leasing and development in the NPR-A. The protection of surface values is also required, to the extent consistent with exploration and development of oil and gas. In 1981, Congress directed BLM to undertake "an expeditious program of competitive leasing of oil and gas" in the NPR-A.

BLM has divided the NPR-A into three planning areas: the Northeast (with approximately 4,600,000 acres of public land), the Northwest (with approximately 8,800,000 acres of public

land), and the South (with approximately 9,200,000 acres of public land). BLM instituted a planning process for the Northeast area that culminated in issuance of a Record of Decision (ROD) in 1998, which was amended by issuance of a supplemental ROD in 2008, and a ROD for the Northwest area was issued in 2004. Although BLM began a planning process for the South area in 2005, it discontinued that process in 2007.

In addition, the NPRPA contains special provisions that apply to any exploration or production activities within areas "designated by the Secretary of the Interior containing any significant subsistence, recreational, fish and wildlife, or historical or scenic value. [1] Based on this authority, three areas within the NPR-A were designated in 1977 as "Special Areas" in which activities were to "be conducted in a manner which will assure the maximum protection of such surface values to the extent consistent with the requirements of this Act for the exploration of the reserve." [2]

The Teshekpuk Lake Special Area was created to protect migratory waterfowl and shorebirds. The Colville River Special Area was created to protect the arctic peregrine falcon, which at that time was an endangered species. The Utukok River Uplands Special Area was created to protect habitat for the Western Arctic Caribou Herd.

The Teshekpuk Lake and Colville River Special Areas in the Northeast NPR-A were enlarged in the ROD that was issued in 1998 and supplemented in 2008, and the 2004 ROD for the Northwest NPR-A created the Kasegaluk Lagoon Special Area.

In July, 2010, the BLM initiated a new planning process for the entire NPR-A, including the South area, and indicated its intent to develop and publish a Draft IAP/EIS for NPR-A. The stated intent was to revisit the appropriate management of all BLM-managed lands in the NPR-A in light of new information (since publication of the 1998/2008 and 2004 RODs for the North and Northwest NPR-A) about surface and subsurface resources and in a manner consistent with the NPRPA. This process included a scoping process that culminated in the issuance of the draft IAP/EIS.

Any and all BLM decisions that impact the NPR-A, including the BLM's draft IAP/EIS, are of critical importance to ASRC and its Alaska Native shareholders. ASRC is the Alaska Native Corporation formed under the Alaska Native Claims Settlement Act ("ANCSA") that encompasses the entire North Slope of Alaska. ASRC has a growing shareholder population of approximately 11,000, and represents eight villages on the North Slope: four that are within the boundaries of the NPR-A (Atqasuk, Barrow, Nuiqsut and Wainwright), and four that are not (Anaktuvuk Pass, Kaktovik, Point Hope and Point Lay).

ASRC owns approximately five million acres of land on Alaska's North Slope, conveyed to the corporation under ANCSA as a settlement of aboriginal land claims. Under the express terms of both ANCSA and ANILCA, the unique character of these lands, founded in federal Indian law and the most significant Native claims settlement in U.S. history, must be recognized by the Congress and the Federal government in making any land management decisions. In the unique framework created by ANCSA and ANILCA, Congress expected that regional corporations, including ASRC, would be responsible for developing the economic infrastructure, including management of the abundant natural resources on and under the lands conveyed to them, to provide for the economic well-being of Alaska Natives.

ASRC is committed both to increasing the economic and shareholder development opportunities within our region, and to preserving the Iñupiat culture and traditions that strengthen both our shareholders and ASRC. A founding principle of ASRC is respect for the Iñupiat heritage. A portion of our revenues is invested into supporting initiatives that aim to promote healthy communities and sustainable economies. By adhering to the traditional values of protecting the land, the environment and the culture of the Iñupiat, ASRC has successfully adapted and prospered in an ever-changing economic climate.

ASRC lands are located in areas that either have known resources or are highly prospective for oil, gas, coal, and base metal sulfides. ASRC remains committed to fulfilling its obligations to Alaska Natives, including its shareholders, by developing these resources and bringing them to market in a manner that respects Iñupiat subsistence values while ensuring proper care of the environment, habitat, and wildlife.

ASRC owns the subsurface rights to 4.7 million acres across the North Slope, and the surface rights to 4.1 million acres. Of that total, approximately 320,000 acres is subsurface rights to land that lies within the NPR-A. Among the four villages that own land inside the NPR-A, Atqasuk Corporation, the village corporation of Atqasuk, owns 72,954 acres; Olgoonik Corporation, the village corporation of Wainwright, owns 170,870 acres; Ukpeagvik Iñupiat Corporation, the village corporation of Barrow, owns 214,810 acres; and Kuukpik Corporation, the village corporation of Nuiqsut, owns 77,013 acres (note that Kuukpik lands straddle the boundary of the NPR-A).

In order to fulfill our commitment to our Alaska Native shareholders, we not only need the ability to manage appropriate development of resources that are on lands owned by ASRC and the various Alaska Native organizations on the North Slope discussed above; we also need to ensure that appropriate development can occur on publicly owned land that is managed by the BLM, including the 22.6 million acres within the NPR-A that is managed by the BLM. This land, similar to other publicly-owned and federally managed land in other areas of Alaska, is increasingly subject to policies and decisions driven by the federal government that may impact the ability of ASRC to fulfill its mission, and it is critical that Alaska Native corporations have an opportunity to meaningfully participate in the development and implementation of polices that impact our ability to fulfill our mission to our shareholders. This is especially true with respect to lands within the three planning areas in the NPR-A.

In addition to creating important jobs for economically disadvantaged Alaska Natives, responsible oil and gas development on the North Slope and offshore would play an integral role in providing a long term, secure supply of energy to the nation. It would also help ensure sufficient future flow of product through the Trans-Alaska Pipeline System, which is now operating at only one-third of its original capacity. Advances in technology lead us to believe that the abundant energy resources available, both onshore and offshore, in Alaska can be developed safely and responsibly, and in a manner that protects cultural and subsistence resources.

ASRC is owned by 11,000 Iñupiat Eskimo shareholders, and approximately 40% of our shareholders reside in the villages of Barrow, Wainwright, Atqasuk and Nuiqsut; all of those communities are within the boundaries of NPR-A. Many of our shareholders that reside within those boundaries use the NPR-A for regular subsistence activities.

In the DEIS, BLM appears to diminish the presence of human habitation within the boundaries of NPR-A by our shareholders and residents of the North Slope. **[13.001]** The information contained in the DEIS with respect to our entitlements and holdings are undervalued by BLM or simply inaccurate. For example, in Volume 1, Section 3.4, Table 3-21, page 336, BLM references that Native corporation surface estate is equal to 215,450 acres. However, in Volume 1, Section 3.4, Table 3-22, page 337, BLM correctly describes the Village corporation entitlements of 705,864 acres. Since the Native Corporation surface estates and the Village Corporation entitlements are essentially one and the same we find Volume 1, Section 3.4, Table 3-21, page 336 to be misleading. This distorts the true ownership structure and gives the public the impression that very little village corporation surface estate is affected by the BLM's management plan.

Maps 2-1, 2-2, 2-3 and 2-4 in Volume 5 reflect most of the Native Corporation lands within NPR-A have either a Patent or are in Interim Conveyance status, and are, therefore, aligned with the information contained in Volume 1, Section 3.4, Table 3-22, Page 337. The information supplied

by BLM in the aforementioned maps within Volume 5 clearly illustrate that the numbers contained in Volume 1, Section 3.4, Table 3-21, page 336 are misleading and therefore incorrect.

BLM also notes that there are 326 Native Allotments within the NPR-A that equal to 30,100 acres and reflects that number as "...approximately 0.13 percent." Our shareholders and Native allotment owners utilize more than 0.13 percent of the NPR-A lands for subsistence and recreation, as suggested by BLM.

While BLM acknowledges that in the DEIS they do not seem to acknowledge to the largest extent possible that our people were the first inhabitants of the area now called the NPR-A and for us to continue our existence on the North Slope we need not only our subsistence resources protected but also our economic resources need to be protected and enhanced. Do not reduce the Iñupiat history and presence within the NPR-A through this document.

BLM has failed to adequately illustrate the true existence of our people and our relationship to the lands within the boundaries of the NPR-A. Iñupiat were the first inhabitants of the North Slope, including the federally recognized boundaries of the NPR-A. Attempts to minimize the relationship our people have with this area are disappointing and misleading. It is essential that we continue to protect and balance the subsistence resources and needs of our people while preserving our opportunities for economic development. This document attempts to strike at the core of our identity as a people and reduce our Iñupiat history and presence within the NPR-A to simple pages in this document.

With this background, we offer the following specific comments with respect to the Draft IAP/EIS.

I. Integrity of the Process. As we indicated in our two letters requesting that the Bureau extend the time for commenting on Draft IAP/EIS, this NPR-A planning process will directly affect the lives, customs, and lifestyles of our Alaska Native shareholders, and other stakeholders on the North Slope, more than anyone else. It is critical that the planning process be transparent and offer the opportunity for our organizations to provide the type of meaningful input that is called for by statute, regulation and good public policy with respect to such an important process.

While we understand and support BLM's desire to complete the IAP/EIS in a timely fashion, especially as it is a critical component of the broader energy development strategy for Alaska and the nation, we are concerned that the Bureau's efforts to push this process through has compromised the ability of organizations that represent the interests of the Alaska Natives that will be most directly impacted to provide the meaningful input that is so critical to the process. This is especially important in the context of Section 810 of ANILCA and the specific direction given by Congress with respect to decisions involving public lands and the impact of those decisions on Alaska Natives' subsistence purposes and needs.

In order to provide meaningful input and commentary on the IAP/EIS, we need to understand how BLM arrived at the planning strategies and positions that are set forth in the IAP/EIS. One of the most productive means of acquiring that understanding is through the public meetings at which BLM presents this information and is available for questions and answers. In this case, we acknowledge that BLM staff held eight public hearings in North Slope villages, and that it will hold another in Point Lay on June 5, 2012, to provide an opportunity to comment to Point Lay residents who were engaged in subsistence whaling activities during the previously scheduled meeting.

We note, however, that BLM convened the first of these public meetings on May 14, 2012, some forty-five days into the public comment period. **[13.002]** By scheduling these meetings at the end of the public comment period instead of at the beginning, affected villages and Alaska Natives have not been able to be as informed on the document and the process as they need to be to have meaningful participation in the process, especially with respect to the potential impacts of each of the alternatives (including cumulative impacts under each of the alternatives) on subsistence activities.

This problem is exacerbated by the fact that the Draft IAP/EIS and supporting materials are voluminous, dense, and very difficult to use and work through, especially in the absence of discussions with the BLM staff -- through meetings held earlier in the process -- that could have provided more of a foundation for understanding the process and substantive decisions under consideration.

Two specific examples are worth mentioning. First, in developing the RODs that were developed for the Northeast and Northwest planning areas, BLM worked closely with stakeholders to develop a strategic framework and approach that relied on "Required Operating procedures" (ROPs) as tools for managing development in a manner that was protective of the lands and resources in areas that were subject to development. These ROPs, which set forth terms, conditions and mitigating restrictions on development activities, were developed through a process that was designed to ensure that the ROPs were specific to the operator and to the development being undertaken.

[13.003] In this Draft IAP/EIS, the Bureau uses the terms ROPs and "best management practices" (BMPs) throughout the document; in some cases they appear to be used interchangeably, whereas in other areas it appears that they mean something very different. Specifically, in many places BMPs appear to apply across the entire NPR-A and to all operators in all areas, as opposed to the operator-specific nature of the ROPs. It is not clear at all from the documents, however, whether the Bureau intends that the terms be used interchangeably (and that they refer to the same procedures/instruments), or if in fact the Bureau is actually changing the existing ROP-based framework.

[13.004] We have been unable to determine how the BMP framework envisioned in the Draft IAP/EIS changes or does not change the current framework, including specific ROPs currently in place. If it is intended to change current ROPs, we submit that (a) BLM has not made clear enough how the ROPs are being changed, which is critical for developers and other stakeholders to understand; and 9b) BLM has not identified new information or changed circumstances that support the need for a change away from the current ROP-based system, which we believe is working very well.

Second, we are concerned that the process as envisioned by BLM will not give adequate time or opportunity for stakeholders to evaluate and comment on the Bureau's selection of the Preferred Alternative. As an initial matter, the Draft IAP/EIS does not identify a "preferred alternative" nor does it include any discussion regarding the Bureau's thinking or preliminary position on any of the four alternatives, so it is very difficult to know where our comments should be focused.

[13.005] In addition, we understand that the Bureau anticipates issuing a final IAP/EIS that will include the selected Preferred Alternative, but that it also expects to adopt the Preferred Alternative without a reasonable opportunity for stakeholders to review the decision documents and comment on the selected Preferred Alternative. We believe that it is critical to that the Bureau not only solicit comments on each of the alternatives that are under consideration (as it has done with publication of the Draft IAP/EIS), but also that stakeholders be given an opportunity to evaluate and comment on the selection of the Preferred Alternative and the rationale pursuant to which the Preferred Alternative was selected.

We note that in past planning exercises, stakeholders were given the opportunity to submit comments on the Final IAP/EIS, including selection of the Preferred Alternative. In fact, for the first amendment to the Northeast Planning Area IAP/EIS, we understand that comments/challenges to the Preferred Alternative that were filed with the BLM after issuance of the final IAP/EIS document but before issuance of the ROD resulted in changes to the IAP/EIS that were made prior to issuance of the ROD, which then included a revised Preferred Alternative. We understand that the Bureau is committed only to meeting the minimum procedural requirements under NEPA (not making a decision on the plan to adopt the Preferred Alternative until at least 30 days after issuance of the Final IAP/EIS). If this is the Bureau's

plan, we request that it revise the plan and commit to more open and transparent process that allows for a formal notice and comment period during which stakeholders can comment on BLM's selected Preferred Alternative and the rationale for that selection.

[13.006] We are also particularly concerned that in the discussion of "cumulative effects" in Chapter 4 of the Draft IAP/EIS the Bureau has selectively characterized "comments and concerns...voiced by North Slope Iñupiat" in a manner that is, at best, incomplete and dated and at worst, misleading. For example, we have reviewed table 4-41, which is titled "Summary of select North Slope concerns/information presented at public meetings" (emphasis added). [3] As an initial matter, we question whether publishing "selected" comments is appropriate in the context of attempting to characterize the views of "the North Slope Iñupiat." Leaving aside the issue of whether it is even appropriate to try to ascribe one set of views to a group of people who have as wide a variety of viewpoints on these issues as "North Slope Iñupiat" have, it appears to us that these comments were "selected" because they all steer the process towards what appears to be a desired outcome – characterizing the North Slope Iñupiat as being opposed to oil and gas development.

[13.007] Without detracting from our concerns about the propriety of trying to make this broad characterization, we also question whether these comments are in any way representative of current attitudes of North Slope Iñupiat regarding oil and gas development. The "selected" comments date as far back as 1976, and the most recent is from 2003. Of the 36 comments that were included in Table 4-41, seven (7) were from the 1970's, eight (8) from the 1980's, and seven (7) from the 1990's; in sum, over 60% of the selected comments were from the pre-2000 era. We know from experience that there have been many more recent public meetings/discussions on oil and gas development on the Alaska and the North Slope in general, and in the NPR-A specifically, and associated impacts on subsistence, and that many North Slope Iñupiat have presented their views/comments/concerns in those fora. If BLM insists on presenting this type of information, we suggest that the Bureau should provide summaries of comments/concerns made at more current meetings in order to better characterize up-to-date attitudes and opinions of the North Slope Iñupiat towards oil and gas development.

[13.008] We also take issue with the manner in which the Bureau characterizes these comments. The second column in the Table lists what the Bureau calls "effects" of activities on resource categories as identified by the commenter. As best we can determine, however, there is no evidence or scientific evaluation or determination that the noted conditions were in fact the effect of – caused by – the cited oil and gas activities. We suggest that a more accurate way to characterize these conditions is to call them "observation of conditions and locations" in the table, so that reviewers of the document are not misled into thinking that the observations have actually been documented as having been caused by, or traced back to, the cited oil and gas activities.

[13.009] Finally, we have also found it difficult to assess how the management strategies established in each of the four alternatives would impact activities and management of private land within the NPR-A. In fact, we could not find a list or any other means of identifying the private landowners within the NPR-A, which seems to us to be an essential element in fulfilling the Bureau's consultation obligations under Section 810 of ANILCA as well as the National Environmental Policy Act.

II. Do Not Need a New IAP/EIS for All NPR-A Planning Areas, but Support One IAP Covering All Planning Areas, Including the South Area. ASRC has participated in each of the planning processes that have been undertaken with respect to the planning areas in the NPR-A, including the designation of special areas within the NPR-A. That includes three different planning processes and associated NEPA environmental impact statement processes for the Northeast and Northwest that ultimately resulted in the currently-effective RODs for these two areas, as well as the planning process for the South area that was abandoned prior to issuance of a ROD for that area.

Based on our experience in these various processes, and accounting for the exploration and development activities that have occurred in the NPR-A since 2000 (undertaken by ConocoPhillips Alaska Inc., British Petroleum, Anadarko Petroleum Corp., Total E&P, Inc., and FEX, L.P., among others), we believe that the land management strategies and practices that were developed and that have been implemented (including Lease Stipulations, ROPs, etc.) are sufficiently robust to achieve the balance between the Congressional mandate that oil and gas exploration and development occur in the NPR-A and the need to protect the resources, including resources that are critical for our subsistence lifestyle.

[13.010] These strategies and practices were heavily negotiated during these processes, and we do not believe that any of the "changed circumstances" cited by the Bureau in the Draft IAP/EIS [4] require that these strategies and practices be revisited, or that there is the need for additional stipulations, ROPs, or new BMPs above and beyond those currently in place. Several of the factors cited in the Draft IAP/EIS as "changed circumstances" that trigger the need for a new planning strategy and process are, in fact, statistics that are constantly changing – oil and gas prices, and estimates of technically recoverable oil and gas reserves, for example. Because these and other factors are constantly changing, it does not make sense to base a decision to change a fundamental planning process on the fact that they have changed. To do so would result in a planning process that was constantly being revised, and, under such a scenario, no development would ever take place because developers would never know what the applicable ground rules for development were going to be.

We also believe that it is both appropriate and necessary that the NPR-A south planning area be included in the preferred alternative. For all of the reasons stated above, it is essential that the master plan for land management in the NPR-A cover all publicly managed land in the NPR-A, and that the Bureau not simply fall back on the historical precedent where the Northeast and Northwest areas are included but the south area is not. We suggest, however, that while it is critical that the south area be included, it may be appropriate to defer leasing in the south area for some period of time, up to twenty years. We understand that there is little current interest in exploration/development of that area, and believe that it may therefore be appropriate to defer leasing in that area.

Of the four alternatives discussed in the Draft IAP/EIS, we support the scope set forth in Alternative D, pursuant to which all NPR-A lands would be made available for oil and gas leasing, although leasing in the lands currently deferred from leasing (approximately 1.57 million acres in northwestern NPR-A and approximately 430,000 acres north and east of Teshekpuk Lake) would not be offered for lease until the deferrals have expired. While we do not necessarily agree with the Bureau that there are conservation needs in these areas that need to be protected from oil and gas development for the duration of the current deferral periods, we would not object to the retention of the current deferral periods, with no extensions, provided that all other NPR-A lands were made available under this alternative.

We believe that the performance-based stipulations, ROPs, and study and monitoring requirements that are currently in place for the Northeast and Northwest planning areas, including the protections built into the program for lands with particularly high surface resource values, are sufficient and should continue to be applied in those areas, and that they should be easily adopted for the South planning area as well. As noted earlier in these comments, it is very difficult to determine whether the ROPs that are currently in effect for the Northeast and Northwest Planning Areas are the same as, similar to, or different from the universe of ROPs and BMPs set forth in the draft IAP/EIS. We therefore suggest that unless the Bureau grants more time for analysis and comment (which would allow us to work with BLM staff to thoroughly understand the similarities/differences and therefore provide substantive comments), we suggest that the Bureau simply adopt those practices verbatim from the IAP/EIS for those two areas and apply them across the entire NPR-A as part of the Preferred Alternative.

We also concur that it is not necessary or appropriate to apply several stipulations common to the other three alternatives to protect biological resources near Teshekpuk Lake, as discussed in Section 2.3.4 of the Draft IAP/EIS. [5]

In summary, we would recommend that the preferred alternative adopt the scope as set forth in Alternative D, and that its apply the currently effective management practices that are in place for the Northeast and Northwest areas across the entire NPR-A, and not include additional or modified practices.

III. Oppose Designation of New Special Areas, Conservation Areas, or Wild and Scenic River Designations. We do not support any expansion of existing Special Areas, any designation of new Special Areas or conservation areas, or any recommendations to Congress regarding designations of any Wild and Scenic Rivers. We are concerned that any expansion of existing areas or designation of new areas (a) is not warranted by current conditions; (b) could have adverse impacts on usage levels of those areas; (c) could have unanticipated impacts on development opportunities on private lands adjacent to or near such areas; and/or (d) could serve as the first step to greater restrictions in the future, despite the fact that they do not result in actual current restrictions.

We concur with the Bureau's determination that evaluating areas within the NPR-A for suitability for Wilderness designation is beyond the scope of this planning effort. [6]We also agree that evaluating lands within the NPR-A for potential designation as Wild Lands is also not appropriate or within the scope of the planning process. [7]

In the Draft IAP/EIS, BLM discusses the issue of determining Wild and Scenic River suitability in the Northeast and Northwest planned portions of NPR-A. [8] As part of that discussion BLM recognizes the efforts undertaken with respect to Wild and Scenic River eligibility in the previous planning processes, noting that while it found 22 rivers to be "eligible" for designation, it "was able to provide protection for all eligible rivers through methods other than Wild and Scenic River designation." [9] As part of this current planning process, BLM found:

No changes in factors relevant to Wild and Scenic River designation;

That BLM remains able to provide protection for these streams through methods other than Wild and Scenic River designation; and

That there is no new information that suggests that the prior conclusions in the 1998 Northeast and 2003 Northwest IAP/EIS and their respective record of decisions (1998 and 2004) should be reconsidered or modified with respect to Wild and Scenic River suitability. [10]

We are concerned that Alternatives B and C both contain recommendations for congressional designation of areas for inclusion in the National Wild and Scenic Rivers System in the southern portion of the NPR-A, despite the fact that the Bureau has acknowledged that the management system currently in place in the Northeast and Northwest planning areas are sufficiently robust to provide adequate protection of rivers suitable for designation without having to resort to actual designation. The areas discussed for potential designation in Alternative B are portions of the Colville River, Nigu River, Etivluk River, Ipnavik River, Kuna River, Kiligwa River, Nuka River, Awuna River, Kokolik River, and Utukok River, and Driftwood and Carbon creeks); in Alternative C they include portion of the Colville River, the Utukok River (within the NPR-A), and the Kiligwa River).

We submit that if the BLM adopts/applies the currently effective management practices that are in place for the Northeast and Northwest areas across the entire NPR-A, including the areas where these rivers are located, it must reach the same conclusions as it did with respect to the 22 rivers in the Northeast and Northwest planning areas -- that designation is not necessary under current management practices.

In addition, we are concerned that designation of any areas for inclusion in the National Wild and Scenic Rivers System will actually have the exact opposite effect of conservation on

designated area(s). The areas discussed for potential designation in Alternative and in Alternative C are already 'wild' and have been subject to relatively little impact from various uses of the water bodies. **[13.011]** Based on our experience in Alaska, and our understanding of similar experience elsewhere, designating these areas as Wild and Scenic River areas and giving them scenic status will only increase their usage, and would actually result in a greater impact.

Given the geographical location of the areas discussed for potential designation in Alternatives B and C, we are also concerned that any such designation could have the potential to create numerous north-south barriers to any future infrastructure across the NPR-A, and we do not believe that the Bureau has adequately assessed the potential impacts of such barriers.

We are also concerned that, with respect to expansion of existing Special Area designations, or the designation of new Special Areas or Wild and Scenic Rivers, such expansion or new designation could have the effect of foreclosing substantial economic opportunities associated with the potential for future development of the NPR-A's enormous projected onshore oil and gas reserves, as well as potential impacts on the ability to develop infrastructure for managing recoverable oil and gas in the Beaufort and Chukchi Seas.

Responsible oil and gas development on the North Slope and offshore would provide a safe and secure source of energy to the nation, create important jobs for economically disadvantaged Alaska Native people and others throughout the country, and help ensure future flows through the Trans-Alaska Pipeline System, which is now operating at only one-third of its original capacity. We remind BLM that the NPRPA requires that the NPR-A be managed "in a manner consistent with the total energy needs of the Nation," and submit that even though we as a nation lack a comprehensive energy strategy, it is indisputable that discovery and development of oil and gas resources in the Arctic, including in the NPR-A, is desperately needed to meet the "total energy needs" of the country.

With advances in technology, it is possible to develop these oil and gas reserves and allow access to much-needed energy resources with minimal land disturbance and without significant disturbance to wildlife. Technological advances have significantly reduced the "footprint" of oil and gas development. We continue to believe that responsible resource development and appropriate management of resources, including subsistence resources, are not mutually exclusive goals.

As a result, we oppose any designations that would erect additional barriers to responsible oil and gas exploration in the NPR-A where there is no demonstrated need for such barriers. This extends to potential barriers to exploration and development that occur not on BLM-managed land, but on privately-owned land that is potentially impacted by such designations.

For example, we are concerned with the size of the 'New Special' areas that are recommended in Alternatives B and C of the Draft IAP/EIS. Two of those areas -- Peard Bay and Kaselaguk Lagoon Special Areas -- almost surround existing private land owned by the Olgoonik Corporation (around Wainwright) and the Atqasuk Corporation (around Atqasuk). If those areas were designated as discussed in the alternatives, any protections that are triggered for Special Areas would have a significant impact on the ability of the two Native Corporations to undertake the type of exploration and development of the resources located on their land to provide for the wellbeing of the Alaska Natives that live in those communities.

We are also more generally concerned with the manner in which the Draft IAP/EIS expands upon the concept of "Special Areas." For example, while the Department of Interior originally established the Teshekpuk Lake Special Area in 1977, that designation in and of itself did not contain any restrictions on oil and gas development. Subsequent efforts to restrict oil and gas development (and other activities) in the Teshekpuk Lake Special Area were based primarily on a vague perceived need to protect migratory waterfowl, and were the result of a negotiated tradeoff to allow oil and gas development in others areas of the NPR-A.

We note that in the Draft IAP/EIS, BLM cites as a major rationale for expanding the Teshekpuk Lake Special Area (in Alternatives B and C) the need to protect important caribou calving areas. We are concerned that there are no objective criteria or guideposts that are being (or that can be) applied to determine what should be considered a "Special Area" subject to restrictions on development and other activities. In the absence of any governing criteria or established process, and in light of the impacts of designation discussed elsewhere in these comments, we suggest that it is not appropriate to create new Special Areas or expand existing Special Areas in the context of this planning process.

We acknowledge that while new Special Area designations may not automatically trigger any additional proscribed management efforts or restrictions on activities within designated Special Areas, there is nevertheless an impact that results from designation. Such designations do create perceptions -- simply drawing an outline around the area on a map gives the impression that the area has been selected as a conservation unit, and that it is or will be subject to current or future development restrictions, regardless of the fact that designation does not automatically trigger any such restriction.

It is also our experience that any such designation is inevitably only the first step towards future restrictions and conditions that could impact both subsistence activities as well as exploration and development of natural resources. This is especially troublesome in light of the lack of governing principles or established criteria for establishing or designating new Special Areas or expanding existing special Areas.

Any degree of uncertainty regarding future restrictions that would be triggered by such designation is in many instances sufficient to drive away parties that may have been interested in partnering with corporations and regional corporations like ASRC to responsibly explore and develop resources, particularly oil and gas resources, that would benefit both the nation and the local Alaska Native populations that rely so heavily on such development. For this reason, we oppose any further extension of existing Special Areas or the designation of any new Special Areas in the NPR-A

Conclusion

ASRC appreciates this opportunity to provide meaningful input to BLM as it continues to develop land management plans for the NPR-A. We urge the Bureau to be mindful of the fact that the NPR-A is, and has long been, the home of Alaska Native people who continue to maintain a strong connection to the land that is fundamental to our very way of life. In addition to the substantial value that our people (and the broader Alaska Native community) will draw from responsible development of the NPR-A's bountiful oil and gas resources, the land and its resources are essential to our subsistence way of life. As it develops the final IAP/EIS and Record of Decision, we urge BLM to fulfill its commitment to an ongoing, meaningful partnership with ASRC and the broader Alaska Native community, and not to take any action that could deprive our people of access to and use of these resources or otherwise adversely impact the culture and heritage that lies at the very foundation of who we are.

Thank you for your consideration of this request.
[1] P.L. 96-514, 42 USC § 6504(a).
[2] 42 Fed. Reg. 28,723 (June 2, 1977).
[3] Draft IAP/EIS, at 221
[4]Draft IAP/EIS, Executive Summary at 2-4.
[5] Draft IAP/EIS, at 22.
[6] Id., at 30.
[7]Id.
[8] Id., at 31.
[9] Id.
[10] Id

[Response to 13.001]
Table 3-21 has been deleted and the preceding language edited.

[Response to 13.002]
The BLM schedules its public meetings in such a way as to allow time for the public to review the document before the meetings are held. The BLM also allows for time after the meetings for the public to submit comments based on information or viewpoints gained at the meeting. All comments are fully considered by BLM regardless of what point in the comment period they are received.

[Response to 13.003]
Section 2.3.5 explains that the shift from required operating procedures to best management practices is a change in terminology, not an underlying approach.

[Response to 13.004]
Section 2.3.5 explains that the shift from required operating procedures to best management practices is a change in terminology, not an underlying approach. Table 2-3 places the current required operating procedures of Alternative A side-by-side with the corresponding best management practices of the action alternatives. In many cases the language of the best management practices are identical or nearly identical to that of the required operating procedures. Where there are changes, they have been introduced to clarify, to enhance environmental protection or implementation, or to provide for a more efficient management and have been in response to comments on the measures by agencies and the public.

[Response to 13.005]
The BLM based its preferred alternative on impacts, rationale and issues contained in the four alternatives contained in the Draft IAP/EIS. Interested members of the public were given an opportunity to comment on all of the draft alternatives. The preferred alternative is within the range of those alternatives, and is very similar to Alternative B in the Draft IAP/EIS. It was developed with the benefit of comments received from stakeholders and others on the Draft IAP/EIS. The BLM, in addition, has communicated with the North Slope Borough and has briefed the BLM Subsistence Advisory Panel, an entity composed of representatives of the local Tribal governments, on the Preferred Alternative. Moreover, additional communications on the preferred alternative are welcome prior to signing of the Record of Decision, which cannot be issued until at least thirty days after publication of the Final IAP/EIS.

[Response to 13.006]
A review of transcripts of BLM's NPR-A Subsistence Advisory Panel meetings as well as transcripts of the public comment and ANILCA 810 hearings held for past and the current NPR-A planning efforts confirm that the concerns and comments summarized in the IAP/EIS, including in the referenced table, are not misleading but indeed are representative of comments that have been submitted to the BLM.

[Response to 13.007]
The BLM has added comments to the table from the testimony at the Draft IAP/EIS and ANILCA 810 meetings/hearings conducted for this plan and recent statements by North Slope residents provided at Subsistence Advisory Panel meetings.

[Response to 13.008]
The heading of the second column has been retitled as suggested.

[Response to 13.009]
The IAP/EIS does not make decisions regarding the management of private lands. For a discussion of land status, see section 3.4.1.

[Response to 13.010]
Section 2.3.5 explains that the shift from required operating procedures to best management practices is a change in terminology, not an underlying approach. Table 2-3 places the current required operating procedures of Alternative A side-by-side with the corresponding best

management practices of the action alternatives. In many cases the language of the best management practices are identical or nearly identical to that of the required operating procedures. Where there are changes, they have been introduced to clarify, to enhance environmental protection or implementation, or to provide for a more efficient management and have been in response to comments on the measures by agencies and the public.

[Response to 13.011]
The authors could find no data demonstrating that Wild and Scenic Rivers designations in Alaska lead to increased use or greater impacts.

The Wild and Scenic Rivers Act requires that designated rivers be managed to protect free-flow, water quality, and the outstandingly remarkable values for which the river was designated. Designation does not necessarily prohibit pipelines or other infrastructure (MS-6400 3.6.B. and 7.5, BLM 2012) so long as these values can be protected. The text was changed to make this clear.

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NPR-A IAP/EIS
AECOM Project Office
1835 South Bragraw Street, Suite 490
Anchorage, Alaska 99508
Re: Comments on BLM- NPRA DEIS

Dear Sirs,

In your introduction to the DEAS you state that the purpose and need of the EIS is to: " ... ensure that the BLM's land management will provide the opportunity, ... to construct necessary onshore infrastructure, primarily pipelines and roads, to bring oil and gas resources from leases in the Chukchi Sea to the TransAlaska Pipeline System."

Cully Corporation, the Pt. Lay Village Corporation, is also interested in ensuring that Alaska's Arctic OCS development in the Chukchi Sea is not shut out from onshore infrastructure development. Cully Corporation is interested in offering our holdings for such infrastructure development. We are concerned that the propose expansion and restrictions of the Kasegaluk Lagoon Special Area in this document could have an adverse effect on our holdings immediately adjacent to those areas and the associated limitations.

Alternative B would significantly expand the Kasegaluk Lagoon Special Area southward to encompass an additional 267,000 acres. We are concerned that this action could potentially restrict the Cully Corporations interest in supporting onshore development and/or a corridor for infrastructure associated with the Chukchi Sea leases.

For Alternatives Band C you state: "While this plan makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea, such a corridor could be accommodated in this alternative, subject to appropriate conditions developed through a NEPA process. This infrastructure would not be allowed, however, on lands where new non-subsistence infrastructure is prohibited" We do not wish to see any alternatives considered, or further restrictions placed, which restrict our ability to fully utilize our holdings, particularly in regard to supporting offshore development. We are concerned such limitations could adversely affect our holdings.

Alternative D, would best protect Cully Corporation holdings, since it has no expansion of Special Areas, no new Special Areas designated, and no prohibition of new non-subsistence permanent infrastructure.

[14.001] Cully Corporation is very concerned that decision made in the EIS will have an impact in areas outside of the NPR-A. Good examples are the Kasegaluk Lagoon Special Area and the Utukok River Uplands Special Area. The first problem is that the document is not very careful

to distinguish the Kasegaluk Lagoon Special Area, an area of 97,000 acres, from the Kasegaluk Lagoon which is over 120 miles long and over 250,000 acres. Quoting from the description of alternatives on page 20, " ... and in the case of Perard Bay and Kasegaluk Lagoon, lands within 1 mile of those two waterbodies." The document repeats these kinds of inaccurate statements throughout the document. The second problem is that the Kasegaluk Lagoon Special Area is small in comparison to the whole lagoon and has little communication due to the longshore current change at Icy Cape. We are concerned that a future study of the whole of Kasegaluk Lagoon will start with the assumption that the restrictions place for the part of the lagoon called Kasegaluk Lagoon Special Area will become the precedent or rule for majority. This same problem exist for the Wild and Scenic River considerations and the Utukok River Uplands Special Areas which don't magically end at the boundaries of the NPR-A. We know that the BLM is aware of this effect as it formed the Department's logic for considering the EIS for the NPR-A as a whole rather than a decision for its parts. The document fails to consider any boundary effects as a result of a future decision, an effect that will affect both the human and biological environments beyond the boundaries. **[14.002]** Your document must eliminate the Kasegaluk Lagoon from consideration, making clear that you are making a decision only for the Kasegaluk Lagoon Special Area. Further you must address the boundary effects.

You note in the draft that, "Scoping comments suggested a variety of resource inventory and monitoring undertakings. These included geological and geophysical mapping; air, weather, water ... " etc. Cully Corp is interested in participating in such studies and having our holdings considered for use in support of oil and gas infrastructure development.

Cully Corporation requests that you work to minimize adverse impacts to subsistence uses without restricting opportunities for oil and gas infrastructure development. We believe this can be accomplished without creation or expansion of existing special use areas that would limit the use of our holdings. We respectfully request consultation to further address these concerns.

Martha Tukrook
Cully Corporation, Alaska Native Village Corporation

[Response to 14.001]
The BLM disagrees. The maps in the IAP/EIS clearly delineate the portion of Kasegaluk Lagoon managed by BLM. The resources to be protected within the boundaries of the Kasegaluk Lagoon Special Area are described in sections 2.3.2 and 2.3.3.

[Response to 14.002]
The BLM's decisions do not apply to lands and waterbodies over which BLM does not have jurisdiction. The boundaries are clearly delineated in our maps, and the IAP/EIS does not indicate that it would result in decisions beyond the geographic scope of BLM authority.

COMMUNICATION NUMBER 15
Kuukpik Corporation,
Native Village of Nuiqsut, City of Nuiqsut

June 15, 2012

Via Email: jim_ducker@blm.gov and Facsimile (866) 611-9420

Mr. Jim Ducker, Project Lead
NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

RE: Comments on Draft Integrated Activity Plan/Environmental Impact Statement for the National Petroleum Reserve in Alaska

Dear Mr. Ducker,

These comments on the National Petroleum Reserve-Alaska Draft Integrated Activity Plan/Environmental Impact Statement ("Draft EIS") are submitted on behalf of Kuukpik Corporation ("Kuukpik"), the Native Village of Nuiqsut and the City of Nuiqsut, the signers individually, and our members, shareholders and constituents in the community of Nuiqsut. We are the Kuukpikmiut, the Inupiaq people of Nuiqsut.

Our organizations and the people of Nuiqsut have historically supported balanced and environmentally responsible oil and gas development. We have historically opposed oil and gas development which is not balanced and environmentally responsible or if such development does not adequately protect the land and the wildlife resources on which we depend for subsistence and our very survival. The critical question here is whether the proposed Bureau of Land management ("BLM") action strikes an acceptable balance.

I. Problems and Defects in the Process.

That question is at the heart of the first problem with the Draft EIS—there is no identified Preferred Alternative. Whether an area can be safely opened for leasing, whether a stipulation or best management practice provides adequate protection, or whether particular mitigation provides any effective protection all depends on context, on what terms and conditions and restrictions surround and support a particular provision. Opening an area for leasing with one set of stipulations, best management practices and mitigation measures in place might be acceptable, but be completely unacceptable with a different set of stipulations, best management practices and mitigation measures.

By not offering a Preferred Alternative for public comment, BLM effectively ensures that the public never gets a chance to comment on the complete package of areas, terms and conditions that BLM proposes to put in place. That is because, of course, BLM will not reveal its Preferred Alternative until the Final Integrated Activity Plan/Environmental Impact Statement is released, and there is no public comment process on a Final Integrated Activity Plan/Environmental Impact Statement.

In other words, BLM's structure for this process deprives the public of any opportunity to comment on what BLM actually proposes to do. At the same time, BLM's decision to avoid presenting a Preferred Alternative makes commenters' jobs that much harder and more time consuming. It is more work to pick and choose (and discuss and negotiate among ourselves) and eventually create a plan that is mutually acceptable among us than it is to point out where a plan proposed by BLM can be improved and fixed. Under BLM's approach, we also have to take the time to review and address what we, at least, consider to be extreme outlier positions that are unlikely to ever be adopted, such as Alternative D's proposal to open the entire bed of Teshekpuk Lake and all of its islands to leasing—a position which raises the prospect of drilling

platforms or gravel islands being constructed in the middle of Teshekpuk Lake. This unnecessary expansion of the amount of work that reviewers have to do is why it especially rankles us that BLM refused to grant our joint request (a request supported by virtually all of the actively commenting North Slope stakeholders) for a 45 day extension beyond June 1, 2012.

So let us be very clear—we are very, very dissatisfied and disgruntled at what we consider to be an inadequate and unacceptable process for a set of decisions that will have major impacts on our communities, our daily lives and our very culture and way of life. We are submitting these comments willy nilly, as best and as thoroughly as we can, but we did not have adequate time and a rushed process leads to mistakes, omissions and less complete analysis.

II. Overarching and General Defects in the NEPA Analysis.

How much, and which, land to open to leasing are the most important issues addressed by the Draft EIS, but how to resolve those issues depends heavily on other matters. Our perception from reviewing the Draft EIS is that BLM has focused so heavily on the issue of how much, and which, land to open to leasing in the coming years that other equally, if not more important, issues have been given short shrift. In fact, relatively little is offered in the way of alternatives on other issues. Other than the "no-action" alternative, the Alternatives propose largely the same mitigation measures, which leaves BLM legally restricted in its ability to adopt other variations or approaches that we might otherwise prefer.

This excessive focus on "how much to lease" also leads to an impact analysis that largely re-states the obvious: an alternative that opens more land for leasing will result in more impacts on the planning area and its resources. Although we recognize that it is difficult to quantify the impacts these planning decisions may have down the road, simply assigning a "more" or "less" impacts label to each alternative based on little more than the amount of land made available is not particularly helpful.

Much of the discussion of impacts is a simplistic comparison of footprints of development—acres occupied—projected under the different Alternatives. This approach is misleading and often dramatically understates the actual impacts of oil and gas development on Nuiqsut, and on every other Native community in NPR-A. For instance, the Draft EIS recognizes and describes the Avoidance effect of oil and gas development, but limits any discussion of its effects and implications to subsistence-specific sections of the Draft EIS. Even there, the conclusion is usually a blythe dismissal of its implications, in spite of its undisputed scope.[1] These issues and their implications for not only Nuiqsut, but also for other Native communities across the North Slope effectively receive no attention in the sections of the Draft EIS on cumulative impacts or other areas of the EIS where the impacts of each Alternative are summarized.

The relegation of these significant impacts exclusively to the sections on Native issues effectively shortchanges our communities, our Native culture, and our future. In fact, the whole point of the Environmental Justice requirements of E.O. 12898 is that impacts such as these not be relegated to Native-only sections, but that they be considered, weighed and given effect overall, in the cumulative impact analysis.

Equally important, **[15.001]** the Final EIS needs to discuss some of the changes in the underlying assumptions and planning policies that affect the analysis in this study. The most obvious change is that this EIS covers an area that used to be analyzed as two separate planning areas (with a third, the Southern region, formerly omitted from planning entirely). The result in the Draft EIS is (and will be in the Final EIS if it is not fixed) a broad-brush impact statement that is both inadequately deep and insufficiently sensitive to specific impacts in discrete locations.

The first problem – inadequate depth of analysis – is simple enough: covering three times as much land area in a single document seems likely to dilute the level of detail of the analysis to a third of what an area would receive were it addressed on its own. The volume of paper involved is an imperfect proxy for depth of analysis, but even the Supplemental Draft Northeast NPR-A

IAP/EIS of August 2007 was comprised of four thick volumes and was probably only a few hundred pages less in total length than the current Draft EIS, which covers over three times the geographic area. There is simply no way that each area is receiving the depth of discussion and information that it would were it analyzed and addressed separately. This defect in the approach, we believe, accounts for much of the conclusory "analysis" in the Draft EIS.

Second, **[15.002]** the Draft EIS is insufficiently sensitive to impacts in discrete locations and trivializes what are likely to be very real and significant impacts. By expanding the planning area covered in the analysis, potentially serious impacts are dismissed as being minor when considered in the vast scope of the planning areas as a whole. This minimizing effect is often apparent in the conclusion sections of each category of impacts studied, such as where BLM concludes that "all areas of soil disturbance would be relatively small as a percentage of the entire planning area."[2] That is precisely the problem. While the percentage of soil affected is small when compared to the 22.8 million acres covered by the planning area, in the case of Alternative C, for example, the long term direct impact covers 15,721 acres and indirect impacts total 41,556 acres.[3] These are large areas of land, yet when viewed through the prism of a percentage of 22.8 million acres, the very real impact on the land and our people is trivialized.

With an area the size of Indiana as the basis of comparison, no single impact short of an EXXON VALDEZ -sized spill is likely to register as "major" when compared to the overall landmass. That distorts the analysis when the reality is that development in what is currently the South NPR-A and even most of the Northwest NPR-A is likely decades away, if it ever happens.[4]

There are also critical impacts on the Native communities from foreseeable development that the Draft EIS completely ignores. **[15.003]** The Draft EIS considers some possible impacts of a Chukchi pipeline (projected length of 750 miles)[5], possibly a separate Beaufort Sea pipeline (projected length of 375 miles)[6] and the Umiat Road (projected length of 102 miles)[7], but nowhere does the Draft EIS discuss what the avoidance effect on Native populations and health would be from such development. If even five miles on either side of these 1,227 miles of linear oil and gas-related structures are effectively removed from the available subsistence range of North Slope communities as a result of the Avoidance effect, some 12,270 square miles of land will be unavailable.[emphasis added] That is over 7.85 million [emphasis added] acres that would be removed from available subsistence areas. Over 7.2 million acres of that amount lies within the boundaries of NPR-A and comprises over 31 percent – almost a third – of the 22.8 million acres with the Planning Area. The impacts and stress that such a loss of subsistence range would put on all of the Native communities, including the potential competition for resources, is nowhere addressed in the Draft EIS. If the Umiat Road were opened to the public, including sports hunters, the impact would be even greater. Nor should that analysis just be relegated to the subsistence, sociocultural, or Environmental Justice sections.

The figures above are not even a complete listing of the infrastructure and area that is projected to accompany those three projects. So the above figures understate the potential impact on the Native residents and communities of the North Slope. Moreover, roads and pipelines are typically separated by 500 or more feet. Though the Draft EIS states merely that "BLM considers it possible that a gravel service road would be constructed parallel to the pipeline to cross the NPR-A,"[8] it is very unlikely that a such pipeline project – roughly comparable to the size and complexity of the TransAlaska Pipeline System ("TAPS") – would be built without a parallel service road (just as TAPS has). So the area of a gravel service road and the 500 foot minimum separation distance area should also be added when calculating the total area that would be removed from the available subsistence range due to the Avoidance effect.

Compounding this problem is the fact that the Draft EIS fails to recognize the ever-decreasing likelihood that any standalone oil and gas developments in the NPR-A will be roadless, as Alpine and Badami are. Original projections for Alpine were that after its initial development, Alpine would need an ice road only every second or third year.[9] The reality is that Alpine has needed an expensive ice road every single year of the fourteen years since construction started

in the winter of 1997-1998. The Draft EIS does back away from BLM's position in prior NPR-A planning processes over the past decade, which all but assumed that any development would be roadless.[10] **[15.004]** But the Draft EIS needs further adjustment to recognize the likelihood of road connections as BLM assesses impacts. The likelihood is that any standalone oil and gas developments in NPR-A will have road connections—that, after all, is the State's plan with the proposed Umiat Road.

[15.005] The failure of the Draft EIS to adequately consider and analyze the Avoidance effect impacts from these foreseeable projects is one of the biggest defects and failures of the Draft EIS. The Avoidance effect and its extent and impact need to be incorporated into every major planning decision, not just for Nuiqsut, but for all of the affected North Slope communities.

These omissions in the Draft EIS (as well as others discussed below) need to be addressed in the Final EIS.

BLM should err on the side of caution by maintaining or enhancing the current restrictions in critical areas. This means continuing to defer development in areas vital to wildlife and subsistence and maintaining or strengthening current restrictions in the Teshekpuk Lake and coastal areas.

III. Who We Are

The remainder of our comments are more detailed and will profit from a discussion of our organizations, of Nuiqsut itself, and of our subsistence lifestyle. Our organizations are the tribal, municipal and village corporation entities representing Nuiqsut.

We start with Nuiqsut itself. Nuiqsut is a community of approximately 500 residents, virtually all of whom are Inupiat Eskimos heavily dependent on a traditional subsistence lifestyle. According to Nuiqsut Paisanich, a planning document adopted by the North Slope Borough (NSB) Planning Commission in 1995:

Today, as in the past, subsistence harvest of wild resources is the central occupation of traditionalist Inupiat. Most of the people in Nuiqsut and other northern Alaska villages are traditionalists. Despite their acceptance of many elements of Euro-American culture, technology and economy, these people continue to participate in and depend on the subsistence way of life, either as hunters or as sponsors and sharers of the hunt. Subsistence provides such necessities as food and clothing, and it organizes the peoples lives seasonally, socially, and ceremonially in the defining patterns of their culture.[11]

Most outsiders do not understand the depth of our dependence on subsistence resources, perhaps because they come to Nuiqsut and see a grocery store and think we're like rural residents of the lower 48 who depend on hunting for some of their food. The situation in Nuiqsut is radically different. Most employment in Nuiqsut is seasonal, so heads of household are working typically three months of the year on ice road work for the oil industry to make money to pay for utilities and fuel and ammunition to go hunting. But the food on our tables mostly comes from subsistence resources. Nuiqsut's dependence on subsistence activities as a core source of food continues. Nuiqsut's residents harvested 267,818 pounds of subsistence resources in 1993 (apparently the last year that there are numbers for the total subsistence harvest). That comes to 742 pounds of subsistence resources per person in Nuiqsut.[12]

The Nuiqsut Profile subsection of the North Slope Borough's 2003 Economic Profile and Census Report shows that 70 percent of all households in Nuiqsut get half or more of their diet from local subsistence resources.[13]

Harvesting subsistence resources and the sharing of those resources among the community are at the very heart of our Inupiat culture. This traditional Inupiat emphasis on sharing makes Nuiqsut (and other North Slope communities) especially vulnerable to disruption in the success of the local subsistence harvest. As the Alpine Satellite Development Project FEIS ("ASDP FEIS") stated in 2005:

> The sharing of subsistence foods is essential to the maintenance of family ties, kinship networks and community well being. Disruption of subsistence-harvest patterns could alter these cultural values and affect community social structure. For the system of sharing to operate properly, some households must consistently produce a surplus of subsistence goods. For this reason, the supply of subsistence foods in the sharing network is more sensitive to harvest disruptions than the actual harvest and consumption of these foods by the primary producer. Thus, when disturbance to the subsistence harvest occurs, it could disrupt the community culture.[14]

The ripple effect of subsistence disruptions is potentially enormous due to the number of people who depend on others for large parts of the subsistence foods they consume. Forty-four percent of the households in Nuiqsut share half or more of their subsistence harvest with other households, according to the Nuiqsut Profile subsection of the North Slope Borough's 2003 Economic Profile and Census Report. (p.33)

Thirty-six percent of Nuiqsut households substantially dependent on subsistence foods get half or more of their food through sharing by other households.[15] Only 35 percent of Nuiqsut households substantially dependent on subsistence foods got little or none of their subsistence foods through sharing.[16] Only 10 percent of the households in Nuiqsut would be unaffected by a decrease in sharing, and sharing is especially sensitive to harvest disruptions.[17] The Nuiqsut Profile section of the 2003 Economic Profile and Census Report included responses from 101 out of 105 households in Nuiqsut.[18] The adverse impact of any disruption in harvests and the corresponding disruption in sharing would be felt by other North Slope Borough communities as well, since 39 percent of the respondents in Nuiqsut shared their subsistence harvest with residents of other North Slope Borough communities.

Nuiqsut is located within NPR-A, and is the community most affected by oil development on the North Slope to date. Nuiqsut is also the community likely to be most affected by the decisions made in this IAP/EIS process in the coming decades. Our proximity to existing development greatly increases the likelihood that a large-scale oil field will be developed nearby. It also makes the impacts hit closer to home. Alpine is only 8 miles from the village of Nuiqsut and can be seen from the village, night and day. The Nanuq/CD-4 satellite pad is only four miles from Nuiqsut. By comparison, Barrow and Atkasuq are each over 130 miles away from the closest active commercial oil field. Residents from Barrow, Atkasuq and the other North Slope communities are also directly impacted by oil and gas development, but so far Nuiqsut s residents have borne the greatest brunt of those impacts.

Between a quarter and a third of Nuiqsut's traditional subsistence range is already unavailable to our people as a result of oil and gas development. As Map 3.4.3-6 of the Draft EIS shows, Nuiqsut's traditional subsistence range extends all the way east to Prudhoe Bay, farther south than Umiat, and west beyond Teshekpuk Lake. Yet the surface facilities of the Alpine, Kuparuk, Palm, Meltwater, Tarn, Milne Point, Nikaitchuq, West Sak and (part of the) Prudhoe Bay fields all occupy lands that are part of the traditional subsistence range of the people of Nuiqsut, the Kuukpikmiut. The Prudhoe Bay area is closed to subsistence activities by law. Other areas are technically open, but overzealous oil field security officers have deterred many subsistence hunters from entering those areas at all, contributing significantly to the areas impacted by the Avoidance effect. No other North Slope village has had anything remotely like such a large percentage of its traditional subsistence range occupied by oil and gas development.

Simply put, Nuiqsut needs our subsistence resources to remain healthy and abundant in order to ensure the long term survival of our community and culture. The oil will all be pumped out of NPR-A within 50 or 60 years. If a community of Nuiqsut is going to exist when the oil is gone, our subsistence resources must continue to be healthy and available to us. To us, protections

afforded by the NPR-A IAP/EIS and the subsequent Record of Decision are matters of survival. We take the level and quality of those protections very seriously, indeed.

As to our organizations, Kuukpik Corporation is the Alaska Native Claims Settlement Act ("ANCSA") Native village corporation for Nuiqsut. Approximately 95 percent of the residents of Nuiqsut are shareholders in Kuukpik, are married to Kuukpik shareholders, or are descendants of Kuukpik shareholders (and will thus become shareholders of Kuukpik in the future through inheritance). Kuukpik is one of the largest private landowners in NPR-A, having received title to approximately 74,000 acres of ANCSA surface estate in NPR-A.

The Native Village of Nuiqsut is the federally chartered tribe for the Kuukpikmiut, the people of Nuiqsut, and represents the traditional government of the Kuukpikmiut. The City of Nuiqsut is the local municipal government for Nuiqsut and represents all of the residents of Nuiqsut, both Native and non-Native.

Our organizations and the residents of Nuiqsut can support balanced and environmentally responsible oil and gas development on our traditional lands because there are associated benefits which, if the development is done properly, will substantially outweigh the impacts. Tax revenue raised from the oil and gas industry funded the construction of residential water and sewer services in Nuiqsut for the first time just over a decade ago. Oil industry jobs provide employment to many Nuiqsut residents, even if largely seasonal jobs rather than the coveted year round positions. Almost every household in Nuiqsut gets dividends from Kuukpik and from Arctic Slope Regional Corporation, both of which rely heavily on royalties from the Alpine oil field.

On the other hand, we will become even more dependent on the lands within the planning area in NPR-A for subsistence purposes, particularly the lands around Teshekpuk Lake, once planned new oil fields near Nuiqsut at CD-5, GMT-1, GMT-2, Fiord West, and Nuna are built. Even though our interests are most heavily focused on the Northeastern section of NPR-A, we are affected by activities across the entire NPR-A, and will become ever more affected in years to come as oil and gas development proceeds west and offshore. As Nuiqsut' s population grows, the amount of subsistence resources the community needs to harvest increases. Because we have been squeezed out of the lands and surrounded by so much development to the east of Nuiqsut (first around Prudhoe Bay, then around Kuparuk, now around Alpine and its satellites), the lands to the west of our village are increasingly critical to our survival and way of life. We and our shareholders, members, and families use the area between Nuiqsut and Teshekpuk Lake extensively for subsistence activities. Leasing and development in this area is thus of critical importance to us as individuals and to the Kuukpikmiut.

Our growing population and continually dwindling range for subsistence activities are likely to force Nuiqsut residents harvesting subsistence resources ever farther and more often into the central portion of the NPR-A. In addition, negative impacts on caribou as far away as the Chukchi Sea coast, Wainwright or Point Lay impact us when those caribou, one of our chief food sources, migrate into our traditional subsistence range (or should but don't because of oil and gas activities, climate change, or other causes). The state of the land and subsistence resources throughout the NPR-A is thus of critical importance to us.

The balance which we must strike between protection of subsistence resources and the environment on the one hand, and oil and gas development on the other, is both immediate and personal. The stakes are much higher for us and for our shareholders than for any employee of the oil industry, any governmental agency or any environmental or trade organization sitting in Anchorage, Houston or Washington, D.C. Given what is at stake for Nuiqsut and the many unknowns that exist, genuine caution and a conservation-minded approach are vital.

IV. The Draft EIS Substantially Underestimates Many Impacts.

As discussed in more detail below, and for reasons specific to the Teshekpuk Lake area and its critical resources, our organizations want the existing deferral of leasing in the Teshekpuk Lake

Special Area extended beyond the current 2018 expiration date. In addition, much of the discussion in this Section also broadly supports extension of that deferral and should also be read for that purpose as well.

The Draft EIS acknowledges, but fails to adequately consider and incorporate, a number of important issues that affect the quality and accuracy of the NEPA analysis. These issues must be addressed in the Final EIS before any decision is made. The Draft EIS underestimates the risks involved in each of the alternatives (probably even including Alternative D, at the extreme of offering 100 percent of NPR-A for leasing). Each of the Alternatives suffers from some of the same basic flaws, such as the absurdly broad scope of the Planning Area itself; a focus on ordering the alternatives from best to worst without making other, more subtle distinctions; and consistently failing to acknowledge factors that will obviously magnify the effects of any activities carried out under these alternatives. The failure to address these issues adequately creates much uncertainly and increases the need for caution in proceeding with any additional leasing or, indeed, with loosening restrictions beyond that which is currently specified in Alternative A.

Our organizations and Nuiqsut advocate for a conservative leasing plan that will allow science and data to guide decisionmaking, rather than "trust that it will all work out in acceptable fashion." Before going into the details of the plan (or plans) that we can support, we look at some of the concerns that lead us to recommend a cautious approach to leasing for the time being.

A. Context is everything.

As noted above, our review of the planning document has confirmed what should have been apparent ever since BLM announced it was going to attempt to study the entire NPR-A in one planning document: **[15.006]** the area is simply too immense to be adequately or practicably covered in one EIS and planning document. The large space leads to cursory analysis in its effort to cover the issues as succinctly as possible.[19] The decision to analyze the entire area as one whole unit will institutionalize this problem, as future Administrations will likely prefer the administrative ease of conducting one EIS process rather than three. Administrative convenience, however, should not trump the quality of the process.

1. Location, Location, Location.

What's worse, **[15.007]** percentage-based accounting does not help us determine where the impacts will be on the ground, or how valuable the particular area is from a resource standpoint. We are just told to "assume that impacts to soils would occur in proportion to [development] within the NPR-A."[20] But that statement is itself belied by the immediate recognition that setting the Southern portion of the NPR-A aside from development distorts the percentages enough to make this an unrealistic assumption.[21]

Where some effort is made to pinpoint impact locations or to place them in context, the picture is none too rosy, especially for the residents of Nuiqsut. In the discussion of caribou impacts, for example, BLM states:

> Functional loss of habitat as a result of displacement due to disturbances, could involve a much greater area. Given that the area most likely to be developed for oil under the action alternatives (economic zones 110 and 120, section 4.2.1.2. "Discovery and Development" (Volume 2) includes the most important calving and insect-relief habitat for Teshekpuk Caribou Herd caribou, impacts to caribou, other mammals, and their habitats could be much greater than predicted based solely on amount of area disturbed.[22]

We agree with this statement wholeheartedly. But more to the point, we believe more impacts analyses should attempt to point towards local effects, as occurred here.

2. Local Impacts Are Not Throw-Aways.

[15.008] The effect of measuring impacts as a proportion of the whole NPR-A area is even more misleading when it comes to the discussions of impacts on subsistence resources. Throughout the Draft EIS, we see impacts minimized or dismissed as being "local in nature" or not having "population impacts" on species ranging across the entire North Slope. But at the same time, there is no doubt that these "local impacts" can be critically important when viewed in a smaller context.[23] Every time a Nuiqsut hunter encounters one of these "local impacts," it can be the difference between success and failure on a particular hunt, and eating or going hungry. For a particular community, a lot of local hunters will likely share this experience, but lumping all of the NPR-A communities together minimizes the effect. That makes the administrative decision process easier, but it doesn't change the potentially large scale of impacts in the affected community—a community which, at least in the short term, is most likely to be Nuiqsut.

Even major, permanent oil and gas developments receive this treatment. The "Conclusion" of each subsistence section of the alternatives' impacts analyses states that "the effects of disturbance from permanent oil and gas facilities on terrestrial mammals during the production phase would be of relatively long duration, but would be local in nature."[24] Contrast this blythe dismissal of impacts with the extended quotation regarding impacts of displacement on caribou at Section IV A (1), above:

> Functional loss of habitat as a result of displacement due to disturbances, could involve a much greater area. Given that the area most likely to be developed for oil under the action alternatives (economic zones 110 and 120, section 4.2.1.2. "Discovery and Development" (Volume 2) includes the most important calving and insect-relief habitat for Teshekpuk Caribou Herd caribou, impacts to caribou, other mammals, and their habitats could be much greater than predicted based solely on amount of area disturbed.

The language in BLM's cursory ANILCA Section 810 Analysis is virtually identical to the initial "local in nature" quote above. It is likewise uniform among all the alternatives.[25] This kind of "analysis" leaves the reader with the impression that permanent facilities are no big deal in the grand scheme of things because the impacts would only occur where there is a little dot on a large map. But there will be lots of dots. And even more importantly, what looks like a small dot on maps in Anchorage and Washington, D.C. are real structures and real activities, which have real consequences for those of us who are being surrounded by more and more of them.

Furthermore, the Draft EIS correctly acknowledges that impacts on subsistence lifestyle and culture are not just felt at the individual level, but at the "family, community and regional levels."[26] This is an important concept to keep in mind. None of these potential developments can be viewed as just a matter of acres disturbed by the "footprint" of the development. Whenever the study indicates that some development or action will be "local in nature," it sends the wrong message to the decision-maker evaluating these alternatives. BLM should not be so quick to downplay local impacts when it has already acknowledged that such impacts are felt across the region.

If the measuring stick is the total amount of land included in the planning area, the vast area of the entire NPR-A is certainly capable of making virtually any development scenario seem relatively insignificant. But as the Draft EIS itself acknowledges in far too few areas, the actual impacts are potentially far greater.

B. Underestimated Impacts.

The Draft EIS vastly under-estimates the impacts of development in several other key ways. These deficiencies need to be corrected so that decisionmakers can rely on more accurate projections of development scenarios and their anticipated effects on the ground.

1. The Draft EIS Does Not Sufficiently Explain or Account for the Avoidance Effect.

[15.009] The Draft EIS understates the impacts of most development because it fails to adequately account for Avoidance. "Acres impacted" by certain types of development (as that term is used by BLM) does not begin to tell the whole story regarding the effects on our resources and ability to access them. For the more than three decades of major oil and gas production on the North Slope, we have been steadily squeezed out of our traditional lands. The Draft EIS does a better job than some earlier EIS processes of explaining the Avoidance effect as a concept. But the Final EIS needs to include hard data, and some real analysis of the likely extent of Avoidance under each of the various scenarios being considered.

a. The Draft EIS Virtually Ignores Critical Statistics Regarding Avoidance.

[15.010] For a decade or more now, Kuukpik has been pointing to the Avoidance data and explaining the need for further studies.[27] Yet once again we see the verbatim recitation of statistics that was offered in the previous NE NPR-A EIS.[28] This information is not any more useful now than it was then, in part because the Draft EIS never does anything with the data that we do have or examines its implications. Instead, it recites some limited statistics that raise far reaching implications, but does not explore or analyze those implications. BLM simply states that avoidance is occurring and piles on a series of unexplained statistics that are clearly relevant, but which are never used to extrapolate conclusions or evaluate potential impacts.

Here is an example, which also serves as a useful synopsis of the points reached in this brief analysis:

> ...Perhaps the most obvious effect of oil development in the Nuiqsut area has been that it has effectively removed certain areas from the Nuiqsut subsistence land use area....
>
> Pedersen and Taalak (2001) conducted a survey of Nuiqsut households during June 1999 through May 2000. Caribou were the most widely used terrestrial big game resource in Nuiqsut, with an average of four caribou per household when averaged for all community households. According to their report, 75 percent of the 371 caribou harvested by Nuiqsut hunters from June 1999 through May 2002 with known harvest locations were harvested west of Nuiqsut, 11 percent were harvested in the immediate vicinity of the community, and only 14 percent were harvested to the east. Seventy-eight percent of all known caribou harvests occurred away (6 to 16 or more miles) from oil production facilities in 1999-2000. ... In addition, 51 percent of the 1999-2000 harvests occurred greater than 16 miles from the Alpine field development, while 27 percent occurred 6 to 15 miles from the Alpine field development.
>
> Further development anticipated in Pedersen et al. (2000) has come to pass with the development of Alpine, Meltwater, Tarn, Fiord, and other oil fields in the vicinity of Nuiqsut. This ongoing development has contributed to a feeling of being "boxed in" for Nuiqsut subsistence users (Pedersen et al. 2000).[29]

A couple of these points are worth special attention. First, there is the acknowledgment that development has choked Nuiqsut's Inupiat residents off from our traditional lands. It has impeded our travels and those of the caribou, introduced untold changes into our community, and left us uncertain of whether we will thrive or vanish in the coming century. Then the Draft EIS states that development has "contributed to a feeling of being 'boxed in....'" We are not feeling boxed in – we are boxed in, or soon will be as CD-5, GMT-1 and GMT-2 are built to the west and southwest, in addition to the existing developments to the north (Alpine), northeast (Oooguruk and Nikaitchuq), east (Kuparuk and Prudhoe Bay) and southeast (Tarn and Meltwater).[30] With physical barriers existing or proposed on three sides of our community, being boxed in is not just a perception – it is a reality.

b. Additional Studies of Avoidance Must be Conducted.

[15.011] The Draft EIS as currently drafted is simply inadequate for NEPA purposes when it comes to Avoidance. Consider, for example, the effect of failing to account for avoidance in Table 4-13 "Estimated surface disturbance for undiscovered oil and gas-related activities under each alternative." BLM estimates, for example, that 11 central processing facilities under Alternatives A, C, and D will lead to 440 acres of impacts. This sounds relatively minor, especially compared to the 22.8 million acres in the entire NPR-A. But this number does not begin to describe the area disturbed for the Inupiat people and our communities. The quoted statistics show that five miles in every direction of a facility is effectively off-limits to us, and that access is affected up to sixteen miles from a facility. There should be some accounting for this, whether in this chart or one like it, since each of these 11 facilities results in an absolute net loss of 5 miles in every direction, and a practical loss of about 16 miles in every direction from the facility. **[15.012]** Further study of the Avoidance effect is needed if BLM is to understand the impacts of its various development scenarios. There are some fairly fundamental questions that have never been addressed by empirical study. How wide an area around a facility is being avoided? Does the effect vary by type of facility? In other words, is a central processing facility given a wider berth than a smaller or less active facility such as a pipeline or a road or satellite drilling pad? How pervasive is the phenomenon among users and does the degree of avoidance vary among users? What is the impact on the degree of effort (and cost) required in order for displaced users to be successful elsewhere? Is there an impact on the overall level of successful harvesting by the displaced users and by the community as a whole? Can increased educational efforts directed at security personnel and users reduce the level or degree of avoidance?

Given the analysis in Section II above that almost a third of the entire NPR-A area might effectively be removed from use as a result of a Chuckchi pipeline and a Beaufort Sea pipeline alone (without regard for associated infrastructure such as roads, pump stations and the like), and given the conspicuous lack of any further studies of Avoidance since the Taalak and Pedersen study in 2001, BLM needs to proceed very cautiously in deciding what lands to open to leasing. The Teshekpuk Lake deferrals in particular should be extended at least until these studies (and others discussed below) are completed.

c. The Draft EIS must Incorporate Some Estimates of These Impacts in All of its Key Conclusion Sections.

[15.013] The Draft EIS does not incorporate any new studies of Avoidance to help address these questions. It re-hashes the same set of statistics from years past, even while acknowledging that the avoidance effects are largely unknown and require further study.[31] Since the necessary studies are clearly not going to be completed before the Final EIS is issued, the appropriate response to that deficiency is to at least use the data that does exist to address possible or anticipated Avoidance impacts, not leave it out of the discussion altogether. When a decision-maker looks at numbers like those in Table 4-13, discussed above, he or she will get the impression that these footprint acreages are the only acres that will be affected, and therefore the only ones that might be off-limits for our subsistence purposes. But this is demonstrably not true when we know that each development is likely to lead to perhaps 16 miles of land in every direction that is effectively closed to us, or impaired. **[15.014]** The ANILCA Section 810 analysis is even worse because it focuses exclusively on the footprint and its effects on subsistence species without acknowledging the impact these developments have on our access to the resources.[32] It is not enough to simply state a few times in the document that avoidance is occurring but ignore or fail to generate a more reflective calculation based on this fact in conjunction with other impacts tables and discussions.

[15.015] BLM needs to use the existing empirical data to develop a more realistic formula or model by which to estimate Avoidance impacts associated with a particular development or activity. Such a formula could be used to generate a table and map showing how much land will

effectively become off-limits in the wake of certain developments. If, for example, 16 miles is something of a cutoff for hunters avoiding production pads, an adequate effort must be made to account for that fact. Perhaps a weighted factor that takes into account percentage of resources taken by distance?

Depicting avoidance effects on a map with some concentric circles showing levels of effects as one moves outward from a development would allow planners and the public to more easily visualize the likely impact. Although it would not always be possible to show with precision where specific oil wells or drilling pads are likely to be located, larger projects that are reasonably anticipated (such as the major pipelines and/or roads) should be shown on a map and their avoidance effects depicted in the way we've described. The likely effects on Nuiqsut and on all of the North Slope villages in NPR-A must be examined. By failing to adequately account for avoidance, the Draft EIS is fundamentally flawed from the outset.

C. BLM must Delay Wider-Scale Leasing, Especially Around Teshekpuk Lake, Until Some of the Major Development Projects and Climate Change Are Better Understood.

There are more and bigger potential projects confronting our people and BLM at this time than there have been at any time in decades. The most immediate of those projects include the Chukchi and Beaufort pipelines and the Umiat Road, but the effects of climate change add major additional uncertainty. Until these projects are further delineated and studied, and climate change and its likely impacts better understood, BLM should be very cautious in deciding which lands to open for drilling in the immediate future. That means continuing the deferrals at Teshekpuk Lake. If these man-made projects are ultimately approved and constructed, they will lead to very large impacts on our resources and access to those resources. With the possibility that our other lands will already have been opened to development, we may very well find our subsistence resources unalterably changed, our people removed from our prime hunting and gathering areas, and different communities in competition with each other and with sport hunters for limited resources.

The Umiat Road and the Chukchi and Beaufort Sea pipelines are described in the Draft EIS as reasonably foreseeable developments. Accommodating potential routes for the anticipated Chukchi pipeline is one of the underlying goals of the Draft EIS. Though eventual construction of the Umiat Road development may be less certain, an Umiat Road Draft EIS is scheduled to be released next year. We cannot overstate the impact that an Umiat Road open to the public would have on our lands and our way of life. Finally, the effects of climate change will greatly impact our resources in ways that are only now just beginning to be studied and understood.

1. The Umiat-Dalton Road.

Our organizations and similar organizations in virtually all the North Slope communities, both inside and outside NPR-A, strongly oppose a road to Umiat.[33] Any discussion of planning alternatives for NPR-A must consider the potential impacts that this road will have on all the NPR-A communities, but especially Nuiqsut and Anaktuvuk Pass.[34]

i. Effects on Caribou.

The Draft EIS projections for the physical footprint of the Umiat Road make it impossible to ignore the impact that the physical structure alone would have on caribou, even ignoring the side effects relating to access and development. Although the Draft EIS acknowledges that BLM cannot even project an accurate footprint, it is estimated that the road would be 30 feet wide and cause a direct surface impact of approximately 7.5 acres per mile of road.[35] The working assumption seems to be that 100 vehicles a day may use the road, the vast majority of which is expected to be heavy industrial traffic.[36] Summer use would likely be considerably higher, which would lead not only to direct traffic impacts, but also would increase related development during the summer.

The most significant impact of the road from a purely physical perspective would be to cut directly across the north-south migration paths of the Teshekpuk Lake and Central Arctic

Herds.[37] These are two of our primary caribou resource herds, and they have already been displaced significantly.[38] Given the limited area available for constructing such a road, it is impossible to see how the road could avoid further interrupting migrations during key seasons. BLM has at its disposal ample documentation showing that caribou respond negatively to road construction, such as the fragmenting of the herd along the east-west divide created by the Milne Point road system.[39] There is also evidence that no amount of convoying can cure this problem, and that calving caribou suffer greatly when roads deflect these animals away from their migratory or calving grounds.[40]

BLM's own analysis concludes that the calving success of the TCH and CAH "would most likely be reduced" if these herds are prevented from reaching their calving grounds.[41] We believe this substantially understates both the probability and degree of the impacts on our most critical food sources. Any impacts on migration and/or calving areas that result in decreased productivity will have serious consequences on all the communities of the NPR-A.[42] So it is bewildering and frustrating to see comments in the Draft EIS that downplay the significance of the Umiat Road on areas and communities within NPR-A based on the fact that an Umiat Road will not itself be "inside" the planning area.[43]

Geographically speaking, that is true – the road will terminate at the arbitrary line that was once drawn to demarcate the NPR-A. But the caribou do not recognize this boundary, and the communities who rely on the caribou do not care whether the impacts that affect the caribou occur on one side of the NPR-A boundary or the other. As it makes its management decisions, BLM needs to take these impacts into account, too.

ii. Socio-Cultural Impacts.

In addition to its direct physical effects on caribou populations and the availability of this key subsistence resource, building an Umiat Road would enormously increase the competition for available caribou and other resources by sport hunters and recreational fishermen, who would use the road and the access it would offer to the Colville River and its tributaries. BLM itself seems to assume that this road would be or become open to the public.[44] A road to Umiat would therefore put vast areas of the North Slope on the road system, as much of the drainage area of the Colville River, the largest river on the North Slope, and its tributaries would became road accessible. Even more importantly, it would allow access by recreational boaters and hunters to the lands closest to Nuiqsut, including the Colville River Delta. Such access to previously unavailable areas would be a tantalizing prospect to many, many recreationists, hunters, and fishermen from throughout Alaska and beyond. Hunting and industrial use of areas that have always been inaccessible to all but a very few would surely increase dramatically, just as has happened to areas along the Dalton Highway.

Increased hunting and fishing by non-Native users would decrease the amount of available fish and game for those who depend upon them the most. It would likely also lead to conflicts between new users and those who have been here for thousands of years. Furthermore, additional development would follow the road route, creating a chain of both support infrastructure for increased travel on the road and likely development of a network of previously non-commercial oil fields. That in turn would force greater dependence on resources around Teshekpuk Lake, which is yet another reason to extend the current deferrals beyond 2018.

[15.016] While we recognize that there is a forthcoming EIS for the Umiat Road, we think that the management issues created by the Umiat Road extend into NPR-A. These issues (and potential solutions) need to be considered now. Specifically, we want to see a requirement that Nuiqsut be designated the only area where boat launches will be permitted on the Colville River.

iii. Resource Competition.

[15.017] With Nuiqsut's traditional subsistence lands already cut off to the east, north, and southeast, and with future projects already proposed to the northwest, west and southwest;[45]

the last thing Nuiqsut's subsistence users need is additional competition for resources coming from the south and southeast, and potentially extending by boat into the very core of Nuiqsut's subsistence range, the Colville River Delta. Where is the Draft EIS' analysis or discussion of that scenario and its foreseeable impacts? The result would likely be to force us to use even more lands further to the west, especially around Teshekpuk Lake, than we presently do. This in turn makes extending the deferral of leasing in the Teshekpuk Lake area even more critical.

Any shift in Nuiqsut's most heavily used subsistence areas may have large sociological impacts wholly aside from impacts on success rates, costs of subsistence gathering, and sharing rates. It may also impact relations between Nuiqsut and our neighboring villages. Relations in areas of overlapping use of the western portions of the Northeast Planning area by residents of Nuiqsut, Atkasuq and Barrow are relatively smooth. It is not hard to see how that could change if Nuiqsut users are forced further into areas also used by residents of these other villages, such as Teshekpuk Lake, which is heavily utilized by Barrow hunters.

[15.018] These readily foreseeable impacts of an Umiat Road are not addressed anywhere in the Draft EIS. That is, in part, understandable since there is another EIS ongoing that will be specific to the Umiat Road. However, since this Draft EIS ignores foreseeable impacts of an Umiat Road on the management of the NPR-A, those omissions, however understandable, amount to deficiencies in the NEPA analysis of this IAP/EIS. It is obvious that any management plan for the NPR-A has to take those potential impacts into account. Key areas such as Teshekpuk Lake need to be protected now.

2. The Chukchi and Beaufort Sea Pipelines.

While the Umiat Road stands to change the Northeast and South NPR-A immensely, the Chukchi pipeline will undoubtedly have major impacts on all three sub-areas, including what is currently designated as the Northwest NPR-A. In fact, to the extent the pipeline affects development along its corridor and the rest of the Chukchi and Beaufort coasts, these ripple effects could be as important or even more significant than a road to Umiat.[46] This is because the pipeline, built to accommodate offshore development, will likely make certain onshore fields more viable as well. So we will have, as BLM itself often notes, synergistic effects of increasing pressures from both sides of the coastline. Each area is critical in its own way.

i. Off-Shore Impacts.

Off-shore development leads to increased barge traffic, can impede or deflect w hale migration, and increases the likelihood of a significant oil spill. Any of these scenarios could lead to significant changes in our whaling practices, decreasing the odds of success in some cases or forcing us to travel farther to find them or to intercept migration paths. Longer trips are both significantly more dangerous and require considerably more time and expense than shorter hunts. The Draft EIS mentions these impacts in passing, and actually sets out a commendable acknowledgment of the importance of whaling to Inupiaq culture.[47] We concur with much of that analysis.

[15.019] What we find lacking, however, is any quantitative or even qualitative analysis of the projected impacts that goes beyond the simple notation that increased activity could result in changed migration routes, which in turn could result in our hunters having to travel further.[48] This is certainly true, but a projection or delineation of the most important routes, hunting areas, and potential corridors for development would be much more helpful in determining the effects on marine mammals, and by extension, the success of our hunting parties.

It is also important to note that even the appearance of increased activity and impacts in the Chukchi and Beaufort Seas may affect our ability to harvest whales. The International Whaling Commission has passed a resolution expressing its particular concern with regard to the gray whale's continued viability in the face of Arctic development. If this concern spreads to include other species as operations in the Chukchi and Beaufort expand, it is possible that the IWC

would reduce our whaling quota of bowhead.[49] The loss of the right to harvest whales in our own waters would have a devastating impact on our community and our families.[50] We rely on whale meat and oil throughout the year, and the actual practice of whaling is a critical aspect of our culture. Unfortunately, all the good intentions, mitigation measures, and safe practices in the world may not affect the way an outside body perceives the situation. It would not take an oil spill or similar high profile incident to trigger IWC action. The increased oil- related activity, combined with the likelihood of increased commercial shipping and fishing in the Arctic as a result of the warming climate, may prompt IWC action.[51] The mere belief that the whales are at risk could cause us to lose our rights. As BLM rightly points out, the loss would have to be offset (to the limited extent that it could be) by an increased harvest of other species.[52] If development impacted caribou to the point where they could not be depended upon to help offset lost whaling harvests, Nuiqsut's food supply would fall short of what is needed.[53]

The health and availability of all these subsistence resources are interconnected—lesser availability of one means that the demand on others increases. What is lost in one place must be made up for in another. If we were to lose any of our whaling rights or our ability to harvest, then we would be even more dependent upon the caribou, fish, and other resources that can help us get through the leaner times. Protecting caribou at Teshekpuk Lake becomes even more important.

[15.020] BLM's offer to hold a "workshop" to determine the exact path of any such pipelines is insufficient in several respects.[54] BLM should form a working group to meet, participate and give input throughout the planning process. The City, Native Village and village corporation for each of the affected villages should be on the mandatory invitation list for each meeting, along with the North Slope Borough, Arctic Slope Regional Corporation, and industry. We are not presently on the mandatory invitation list, and as the most direct representatives of the affected villages, the native corporations, city, and tribal governments should be invited. The likely reality is that many of the village entities will not have the time or resources to participate very actively, but this project poses such enormous potential risks and benefits that all of the village entities should be invited.

ii. Coastal Impacts.

A Chukchi or Beaufort Sea pipeline across NPR-A would both necessitate and facilitate increased development along the Chukchi and/or Beaufort Sea coasts. Most immediately, a significant facility will be required at or near the point where an offshore pipeline lands.[55] No matter where these facilities are ultimately built, they will be located in the coastal range of either the Teshekpuk Lake or Western Arctic caribou herds, or perhaps both. Studies have shown that the coastal areas are among the most critical areas for both herds, especially as insect relief areas. The land to the north and east (and some to the south) of Teshekpuk Lake, in particular, is vital to the success of several herds.[56]

The Draft EIS acknowledges this at some points, but seems almost determined to downplay the importance of this area.[57] It is of course well known that the coastal area of the Beaufort Sea is believed to hold some of the best reserves in the entire NPR-A, as the Barrow Arch runs roughly along the coast. Any large project in such a sensitive area will have impacts on the herds that rely on these coastal areas.[58] It is far better to err on the side of caution and not increase such impacts in an area critical to the Teshekpuk Lake Herd by prematurely opening such areas to oil and gas leasing.

For these reasons, we also support the proposed one mile coastal buffer of Alternative C (K-6) that runs from Tangent Point (Dease Inlet) east until it meets Kuukpik-owned surface lands.

iii. Inland Impacts.

The non-coastal impacts of installing a 750 mile pipeline across the entire NPR-A are potentially enormous. Begin with BLM's stated assumption that a road would be built to accompany the pipeline.[59] That alone leads to at least 3,000 acres of direct surface impacts

just from dumping the gravel on the ground.[60] The reality is that the impacts are exponentially greater. Proximity to such a pipeline would result in development of previously uneconomic fields, which is a benefit. But it also would create additional impacts. As BLM casually notes, large discoveries anywhere offshore would result "in even more habitat and disturbance impacts in the NPR-A than assumed in section 4.2.1.2, especially in areas critical for insect relief by caribou."[61]

We do not presently know enough to support or oppose a Chukchi or Beaufort Sea pipeline across NPR-A. We simply don't know enough about these possible projects to determine whether they would be designed and constructed in a balanced and environmentally responsible manner. We support responsible development of resources within the NPR-A.

But whether and where to build such pipelines is not the issue currently before us. The question at hand is what lands to open for leasing now and in the immediate future. Any answer to that question must take into account the reasonable likelihood that, within 15-20 years, there will be a Chukchi and/or a Beaufort Sea pipeline stretching across NPR-A.

[15.021] There is no straight forward, detailed analysis or acknowledgment of possible pipeline-related impacts in the Draft EIS impacts analysis. Its likelihood is consistently acknowledged, but its ripple effects are not fully considered. The closest thing to an analysis of the likely effects of the pipeline is a couple of sentences in the cumulative effects section, and one paragraph buried in the Section 810 discussion (which is itself buried as an Appendix, as usual). There we find the only clear acknowledgment of the potentially region-wide implications of a Chukchi pipeline stretching from "onshore facilities on the Chukchi Sea coast, probably at Wainwright...across the entirety of the NPR-A" to TAPS.[62] Likewise, **[15.022]** the cumulative impacts section tells us that the pipeline "could have effects on the Teshekpuk Lake Herd and Western Arctic Herd."[63] How and why this statement can be qualified with a "could" is beyond us, as it obviously would impact these herds. Even balanced and environmentally responsible pipeline projects much smaller than these have some impact on caribou. While there is no analysis to speak of, BLM reaches the correct conclusion, namely that "There is the potential for this scenario to have a major impact on subsistence resources and access to those resources."[64]

Despite this acknowledgment, **[15.023]** the Draft EIS fails to discuss in even a rudimentary way the practical effects and impacts that such extensive development could or would have on land and sea resources. Just as with the Umiat Road, this failure is understandable to some degree because the impacts are of speculative and unknown quantity. But increased activity along the coasts and throughout the pipeline corridors would have significant impacts, and we cannot simply ignore these for lack of certainty as management decisions are made for the future of NPR-A.

[15.024] What limited estimates there are for the Chukchi and Beaufort Sea pipelines tend to be too low. The Draft EIS repeatedly states that impacts for the Chuckchi pipeline will be limited to 100 hundred acres unless a road is built, in which case the impacts will be more like 3,000 acres of gravel alone.[65] But the Draft also repeatedly acknowledges that a road is almost certain to be built.[66] By casting the 100 as the likely impacts, and the 3,000 as the outlying possibility, the Draft EIS significantly understates the more realistic impacts. Obviously, 3,000 is the critical number, not the unlikely 100 acres stated elsewhere.

C. Climate Change is Causing Unknown But Significant Changes.

The effects of climate change have to be considered in this discussion of "unknowns" as well. This Draft EIS is the first we remember that has gone to even these limited lengths to incorporate the effects of a warming Arctic in the impacts analysis.[67] We are happy to see this development because it recognizes the hard truth that we face on the ground in the NPR- A: climate change may represent an even single greater potential threat to our subsistence resources and way of life than any reasonably foreseeable oil and gas developments.[68]

The Draft EIS also recognizes that the Inupiat stand to suffer disproportionately from the effects of climate change, especially considering how minimal our contributions have been to this global problem.[69] This stems not only from the unknown but potentially catastrophic impacts on our resources, their habitat, migration patterns, and ability to thrive in the wake of changing vegetative and hydrologic systems, but also from more tangible and immediate changes that we see each season. We depend on the ability to store food in our ice cellars so that we can be prepared in the winter for times when there is no fresh food to be gathered or hunted. If we cannot store our provisions as long, then we must hunt more frequently, which requires more fuel, ammunition, time away from the community, and longer distances to travel. The latter is not just important because of increased time and fuel, but also because changing freezing patterns and increased thermokarsting will make tundra travel more dangerous.[70]

We understand that it is impossible to predict all the affects that climate change may have on NPR-A, our resources, and our way of life. That said, the Draft EIS recognizes that "Climate change will cause alterations to the environment, ecosystems, and habitats of the North Slope...."[71]

Furthermore, the Draft EIS consistently indicates that climate change is likely to lead to primarily negative effects on resources, and that these effects will be "greater than predicted."[72] The science supports this conclusion, and many of the impacts discussions incorporate these references into their conclusions. Thus, BLM needs to consider carefully how it is going to utilize this information going forward. If all the science points to significant, negative impacts, predictions of which are sketchy and probably understated, then the action alternatives and eventual management plan need to be evaluated in light of that fact. BLM should be patient, careful, and cautious about what lands are opened for development now to make sure we understand more fully what the impacts of leasing, climate change, and development projects are going to be in this region. The unknown impacts of climate change are still more reasons to extend the deferrals of leasing at Teshekpuk Lake.

D. The Deferral of Leasing in the Teshekpuk Lake Special Area Should Be Continued Beyond 2018.

From the time of the 1998 Record of Decision on the IAP/EIS for the Northeast NPR-A Lease Sale under the Clinton Administration until 2008, the area north and east of Teshekpuk Lake was off limits to oil and gas leasing. During that period, another broad swath of land to the south and east of Teshekpuk Lake could be leased, but could only be developed from outside of those leases, since no surface activities were allowed in that area (note it wasn't just surface facilities that were prohibited, but rather no surface activities).

The Record of Decision for the 2008 Supplemental IAP/EIS for the Northeast NPR-A ("2008 ROD") under the Bush Administration expanded the area available for leasing further to the north than previously had been allowed. The 2008 ROD also dropped the requirement that there be no surface activities in that expanded area, but prohibited permanent facilities except for pipelines.

Even more importantly the 2008 ROD took the areas in which no leasing had been allowed at all and planned to lease those lands (except for Teshekpuk Lake and its islands) after a 10 year deferral, expiring in 2018. The 2008 ROD divided the area north of the Lake into seven lease tracts, labeled A through G, and set specific amounts of land that could be disturbed in each tract.

Part of the justification in the 2008 ROD for overturning the Clinton Administration's finding that these lands should not be leased at all, was that scientific studies would be conducted during the ten year deferral so that oil and gas development could then occur without harming the wildlife resources that rely so heavily on this critical area. As the 2008 ROD stated:

> Also, prior to any authorization of construction of permanent facilities in the portion of the Goose Molting Area deferred from leasing for 10 years (see Map

> 2), the BLM, after conferring with appropriate Federal, state, and NSB agencies, would complete a research study of the effects of disturbance on molting brant and other geese that utilize the lakes north of Teshekpuk Lake. After conferring with appropriate Federal, state, and NSB agencies, the BLM will develop this research study to include at least 3 years of data collection and focus on 1.) providing baseline data for detection and/or measurement of disturbance, 2.) identifying significant development-related disturbance factors, 3.) evaluating consequences to geese from disturbance within the Goose Molting Area considering relevant stipulations and ROPs, and 4.) identifying additional mitigation measures to protect molting geese that may be considered necessary as a result of the study, including recommendations for appropriate placement of permanent facilities based on the study's identification of development-related disturbance factors. In addition, the study results would be used to identify specific location(s) of facility(ies) within the approximately 5,000 acre parcel of land in T. 15 N., R. 4 W., U.M and T. 16 N., Rs. 3 and 4 W. U.M. (as depicted on Map 2) within the Goose Molting Area Lease Tracts F and G. Any additional mitigation practices that are identified as a result of this study that are necessary to achieve the goal of lease stipulation K-4 shall be implemented or agreed to prior to authorization of construction.[73]

Though the primary focus of the Special Area was wildfowl, a Teshekpuk Lake Caribou Habitat area was also designated, and the 2008 ROD specifically required that certain caribou studies be performed.[74] For instance:

> The [caribou] study shall include a minimum of four years of current data on the TLCH movements and the study design shall be approved by the AO in consultation with the appropriate Federal, state and NSB wildlife and resource agencies.[75]

So, in areas previously completely off limits to leasing and surface activities, BLM promised to perform studies and gather data prior to any leasing in order to ensure that wildlife resources, both wildfowl and caribou, could be adequately protected before oil and gas leasing and development would be allowed. The promise in the 2008 ROD was that the studies and determinations regarding impacts had to happen before any leasing or development would occur.

Those studies and determinations have not been performed. As the North Slope Borough, a cooperating agency in this IAP/EIS process, noted in its scoping letter at the start of this process:

> The areas closed under the existing (2008) management plans should remain closed. We are not aware of significant new wildlife or subsistence data, or industry technologies and practices that have been reported since the existing plans were adopted that would justify opening areas that are now closed to leasing or surface facilities. It was rightly determined after significant consultation and analysis leading to adoption of the existing plans that no package of mitigation measures could provide appropriate protection within the areas left closed to leasing or to surface facilities. Furthermore, newly recognized but poorly understood stresses arising from climate change only amplify the need for the wildlife resources dependent on these areas to be protected from the impacts of oil and gas activities.[76] (Emphasis added)

The Draft EIS itself repeatedly recognizes that the promised studies have not been performed:

> While there have been no experiments conducted with the Teshekpuk Caribou Herd to determine whether oil or gas development in the calving area would displace caribou or affect the productivity of the herd, caribou

> behavior during 1997 and 2001 suggest oil or gas development in the Teshekpuk Caribou Herd calving area could impact caribou.[77]

Elsewhere, the Draft EIS states that:

> Overall, the precise impact to caribou cannot be stated regarding development north of Teshekpuk Lake of oil and gas resources existing in currently unknown quantities and distribution. An estimate of acres of habitat alteration can be made (as above) and it is acknowledged that displacement of caribou around that infrastructure is likely to further increase the effective loss of habitat.[78]

Other scientific studies confirm that adequate studies and data do not exist. A 2009 study jointly authored by employees of the oil industry and the North Slope Borough, Teshekpuk Caribou Herd Movement, states that:

We require additional years of GPS data collection to discern any real trends in caribou routes.[79]

Yet, the Draft EIS very clearly recognizes the high potential for very serious negative consequences to the Teshekpuk Lake herd from oil and gas development in these critical calving areas around the Lake:

> Functional loss of habitat as a result of displacement due to disturbances, could involve a much greater area. Given that the area most likely to be developed for oil under the action alternatives (economic zones 110 and 120, section 4.2.1.2. "Discovery and Development" (Volume 2) includes the most important calving and insect-relief habitat for Teshekpuk Caribou Herd caribou, impacts to caribou, other mammals, and their habitats could be much greater than predicted based solely on amount of area disturbed.[80]

Other findings in the Draft EIS are to similar effect. As to a subarea within the deferral area, Maps 3.3.6-5, 6-6, and 6-7 show that the TLCH uses the narrow eastern corridor (south of Lease Lots F and G) and the northern coastal plain for its prime calving, and south of the Lake for insect relief. In examining what the impacts might be if BLM opens that area to leasing and production, the Draft EIS states:

> Cumulative effects on caribou distribution and abundance are likely to be long term, lasting as long as the life of the oil and gas fields. Any reduction in calving and summer habitat use by cows and calves as a result of future onshore development in support of onshore or offshore leasing would represent a functional loss of habitat that accumulates and could result in long-term effects on the caribou herds' productivity and abundance.[81]

Those scientific studies that are available very clearly identify major risks to the TLCH that would be created if the herd were deflected from its normal calving areas by oil and gas activities. Survival rates for newborn calves plummet dramatically when the herd calves outside traditional calving grounds. The Draft EIS notes that animals may be deflected or disturbed by development occurring in or around these most critical areas. Some animals have been known to abandon calving grounds entirely due to roads and other development in the area.[82] This can have dramatic and severe impacts on reproductive success.

TLCH animals, for example, have proven to calve much, much less successfully when they calve outside the area around Teshekpuk Lake that has to date been closed to leasing and surface occupancy. According to the 1997 Alaska Department of Fish and Game Caribou Survey-Inventory, the calving success rate for animals that calved outside the TLCH's traditional calving grounds was poor - only 8%. In the same year, calving success for the animals that did calve in the traditional calving grounds was 75%.83 This was not a one year occurrence. As the 2003 ADFG Caribou Survey-Inventory noted, 90% of the TLCH animals that calved in the area

around Teshekpuk Lake since 1990 did so successfully whereas the overall calving success rate for TLCH caribou calves born outside the Teshekpuk Lake area during this same period dropped to 25%.[84]

That's an enormous swing that over time could clearly cause herd size to drop dramatically. In the 1997 study, 75 out of 100 calves survived when the traditional calving grounds were used, versus only 8 calves out of 100 who survived outside those traditional calving grounds. The 2003 study showed a similar size gap in survival rates. Not to beat a dead horse, but it doesn't take too many years of either 66 fewer calves out of every 100 (1997 study) or 65 fewer calves out of every 100 (2003 study) surviving their first year of life to change a stable or growing herd to a rapidly shrinking one.[85]

The Draft EIS further notes that every Alternative except B "would permit activities" in these traditional calving areas, that these activities would expose the herd's females to stress and migration impediments "when they are most sensitive" and that displaced females "would be unlikely to find" alternative suitable calving grounds elsewhere in their range.[86]

The most important types of lands for caribou are calving grounds, insect relief areas, and certain key movement corridors where migratory alternatives are limited. It is imperative that management decisions avoid infringing upon, and minimize impacts to, these critical areas. All of this evidence indicates that, based on what is currently known, oil and gas development cannot safely be allowed in the TLCH's calving grounds, insect relief areas, and certain key movement corridors.

Furthermore, the Draft EIS acknowledges that climate change is likely to cause calving caribou to move north even farther, presumably making these areas even more important in the future.[87]

[15.025] The bottom line is that the promised studies have not been completed to determine whether the deferred area can be safely and responsibly opened. The potential harm to the resources without the necessary data and findings is too great. The 2008 ROD itself implicitly spells out the consequences of failure to perform the necessary studies and gather the necessary data when it states that the area:

> [W]ould be deferred from leasing for ten years after signing of the ROD. Leasing could occur after that time if the existing NEPA analysis is adequate.[88] (Emphasis added)

With all of these acknowledgments that the data is inadequate, that the necessary studies haven't been done, and that the potential negative consequences are very substantial and unknown, leasing of the deferral area should not and cannot occur.[89]

The deferral should be extended indefinitely beyond 2018 until it is satisfactorily demonstrated that leasing and development can occur in these areas without significant harm to their wildlife resources, particularly caribou. This deferral needs to cover the entire existing deferral area, including both those portions of the Southern Caribou Calving Area within the existing deferral and all those areas to the north. The remainder of the Southern Caribou Calving Area should have special protections, and BLM should very seriously consider adding any of its currently unleased areas to the deferral in order to revert to something closer to the Clinton Administration's more protective and more prudent approach to this area. The deferral should also cover the entirety of both Caribou Movement Corridors. We very strongly believe that the deferral should be extended indefinitely until such time as it is very clear that the necessary studies and information has been gathered and that these lands can safely be opened to oil and gas leasing.[90]

For these same reasons and because the two calving success studies demonstrate just how critical the traditional calving grounds are to the Teshekpuk Lake Caribou Herd, we support broadening the purpose of the Teshekpuk Lake Special Area to include the protection of caribou and shorebird habitat.

V. Other Critical Issues.

A. The Section 810 Analysis is Worse Than Just Deficient.

This discussion cannot really be considered complete without some comment on and discussion of the conclusory, misleading, and virtually worthless Section 810 analysis in Appendix A. One of the factors considered in the Section 810 analysis for each of the alternatives is whether there would be a "reduction in the availability of subsistence resources caused by a decline in the population or amount of harvestable resources."[91] For all the Alternatives except D, BLM concludes that the proposed action "will not significantly restrict subsistence uses and needs.[92]

First, those conclusions fly in the face of all of the specific findings just quoted in the preceding section. Second, **[15.026]** the "analysis" supporting this conclusion in each case is more conclusion than analysis. The author simply reiterates the position (for make no mistake, that is what this is) that impacts "would be minimal, or would be adequately mitigated by special area designation and stipulations."[93] No one can know that the special area designations or mitigation measures will provide sufficient, or indeed any, protection until competent scientific studies have examined both the baseline situation in the area and the effect of BLM's new ROPs, BMPs, and stipulations.[94] Given the two studies cited above regarding calving success, the Section 810 conclusion is unwarranted as to Alternatives A, C and D.

The remaining discussion throughout the Section 810 analysis does nothing more than refer the reader to the similar flawed and unsupported conclusions elsewhere in the EIS, particularly the "Subsistence" subsection of each alternatives discussion, while completely ignoring the many findings and studies cited and quoted in the preceding section. BLM should discard the current Section 810 "analysis" and start from scratch as the Final EIS is prepared.

B. The Teshekpuk Lake Caribou Migration Corridor Should Be Enlarged.

We support Alternative C's option of enlarging the Teshekpuk Lake Caribou Migration Corridor to the south.[95] If anything, we would like to see more than just the 1700 acres proposed added. BLM should err on the side of caution, since these areas are the "most critical" because caribou "must pass through them to get to and from insect relief areas" on the coastal plain.[96]

[15.027] The area to the east of Teshekpuk Lake is a particular problem because nearly all the parturient cows pass through this area either shortly before or after calving."[97] That migratory corridor is quite narrow, and the natural "funnel" leading into it is heavily used during the migration to the coast. Allowing this space to remain free from permanent development seems like a veritable no-brainer considering the other areas that remain available, the great advances in horizontal drilling techniques, and the great benefit the protection will provide at such small expense.[98]

We do question the wisdom of leaving the option of building a pipeline through these migration corridors on the table. This would be an extraordinarily bad place, for instance, for a Beaufort Sea pipeline to come onshore or to traverse. After all, we are talking about the migration path of tens of thousands of caribou. Based on the information discussed supporting the need to continue the deferral, a pipeline going across their path is precisely the last kind of development we want to see in this area.[99] It may not be necessary to prohibit such a development, but very stringent requirements should be imposed to ensure that other, less environmentally impacting alternatives are encouraged even if more expensive and that if no other alternatives exist, that maximum design requirements and other mitigation is incorporated.

C. Waterbodies.

[15.028] The Draft EIS needs work in a number of areas addressing waterbodies. First, BLM needs to expand its discussion of ephemeral creeks. There is a distinct lack of discussion of the importance of ephemeral creeks that connect larger waterbodies. When a fish-bearing lake freezes over winter, it must be "re-charged" by a flow from some other waterbody that carries a

few fish or fry into the lake to repopulate it. Often, these restocking efforts occur by way of the ephemeral creeks that pop up in various places during breakup and early summer. There are some indications that thawing of the permafrost at shallower depths is causing some of these ephemeral creeks to disappear, so that these lakes are not being restocked. These ephemeral creeks will likely become increasingly important as industry continues to require more and more water to conduct ever-increasing operations in the NPR-A at a point when some areas of NPR-A seem to be getting dryer.

We fully support the proposed reconciliation of the NW and NE Lease Stipulation D-1 into the Northeast version's stronger outright ban of exploratory drilling in rivers, streams, and fish-bearing lakes.[100] Given the availability and advances in horizontal drilling techniques, there is simply no need for drilling squarely in these waterbodies. We support this and other amendments that remove discretionary exceptions to otherwise well-meaning regulations if "there is no feasible or prudent alternative." The expanded version of Stipulation K-3b is also welcome, though we have to question how much exploration a seasonal restriction like this is really going to affect since most operations only occur during the winter in the affected areas anyway.

We strongly oppose leasing of the Teshekpuk lakebed itself (as contemplated by Alternative D). It is possible that horizontal directional drilling techniques could successfully produce oil from beneath the surface of the lake without harm to the lake body and the surrounding environs. At some point, the science and data might support the conclusion that production can occur safely, but the Draft EIS doesn't provide the information that would support such a conclusion. The Draft EIS does not offer any specific analysis of lakebed production feasibility or safety, so this proposal seems more like an outlier to provide context than a serious proposal. We oppose leasing of the lakebed of Teshekpuk Lake.

[15.029] The Draft EIS asserts that the impacts on rivers and other waterbodies are basically proportional to the amount of land that is opened for development under each Alternative.[101] That is not necessarily the case at all. The distribution of fish-bearing lakes is not equal throughout NPR-A, nor is the distribution of lakes suitable for use by industry co-extensive with fish-bearing lakes. The more lakes in an area that don't have fish, the less likely industry is to need to tap fish-bearing lakes. This past winter, Repsol was able to tap largely non-fish bearing lakes for its exploratory program (but not quite). Other areas are not so fortunate to have the abundance of lakes that the Colville River Delta and the area around it have. On the critical issue of year round freshwater demand, for example, BLM simply states that the degree of foreseeable impacts "under Alternative A (110 oil and gas production pads) should be 43 percent more than Alternative B, 27 percent less than Alternative C, and 35 percent less than Alternative D."[102] This is simply not accurate.

[15.030] Both the direct "fish" analysis and the various iterations of subsistence impacts discussion insofar as they focus on fish, are lacking in depth or detail.[103] The cumulative effect on fish section does not even appear to mention a single freshwater fish by species.[104] The subsistence cumulative impacts analysis (section 4.7.7.13) is not much better, noting our residents' concern that fish numbers are decreasing, but not offering any commentary or analysis beyond that. Identifying a potential problem, but then not examining it does not seem to comply with NEPA requirements.

If we dig into the alternatives analysis where we might expect to see more in- depth discussion, we do get more by way of explanation regarding the impediments and mechanisms that can increase fish mortality, impede upstream migration, and otherwise damage or disrupt the natural flows. However, that analysis if deficient as well. There seems to be a willingness to accept lapses in data.

BLM may have overlooked some of these kinds of issues in its efforts to focus on caribou. But the importance of fish to the communities of the North Slope and the village of Nuiqsut in particular should not be overlooked. Fish provide the most pounds per capita (251 pounds in

1993) of any subsistence resource harvested in Nuiqsut, consistently making up about 30% of the total harvest and subsistence meat consumed.105 Much of the catch is shared in accordance with our traditions, primarily within the village, but occasionally with neighboring communities as well—especially arctic cisco. The majority of this harvest comes from the Colville, its tributaries from the Delta to the Ninuluk, the Nigliq Chanel, Fish and Judy Creeks, and nearby lakes.106 Accordingly, we generally support BLM's proposals aimed at ensuring that these water bodies are kept in as natural a state as possible under the circumstances.

Limiting access to and controlling activity and impacts around the Colville will be a critical part of limiting impacts on Nuiqsut and the health and well-being of our community. We request that boat access to the Colville be prohibited from anywhere other than Nuiqsut. No other strategy is likely to mitigate the impacts to this most vital Arctic artery. What we need is some ability to monitor and help control access and uses of the river. This could include both a quick check of boats accessing the river to be sure they are properly equipped with safety and environmental gear, and monitoring harvests by sport users. We would like to work cooperatively with BLM and/or the State to make sure that resources are used responsibly in this area.

We support BLM's proposal to expand the Colville Special Area to include all raptors. We do not support any designation of any of the identified upper Colville River tributaries as Wild and Scenic Rivers.

VI. The Proposed Regulatory System Is Not Ideal, But Preferable to the Previous Iteration.

In 1998, the oil industry, Native groups and other stakeholders worked closely with BLM and industry to develop prescriptive stipulations for oil and gas production in the Northeast NPR-A. For the brief time they were in effect, these rules provided clear and definite rules and fair mitigation measures regarding such issues as site and road placement, waste management, and operating seasons. Those 1998 policies, stipulations, and other requirements fulfilled Congress's policy that "utilization of the public lands in Alaska is to cause the least adverse impact possible on rural residents who depend on subsistence uses of the resources of such lands." (16 USCA 3112(1).)

During the Bush Administration's overhaul of Arctic energy policy just a few years later, the prescriptive system was replaced with "performance-based" stipulations and required operating procedures (ROPs) in the Northwest and later Northeast NPR-A. We vehemently opposed that change at the time, and continue to believe that the "performance- based" stipulations are simply not as protective as the former prescriptive system in part because the performance-based system creates so much administrative discretion that exceptions can easily swallow rules.

[15.031] Performance-based management provides a loosely defined goal for industry to achieve but gives little up-front guidance on how to achieve that goal. The gap between the goal and guidance is filled on an ad hoc basis with decisions made by the BLM's authorized officer. The process inevitably increases the amount of discretion involved in the process. It also means that different applicants may get different results for similar projects. More discretion means that the range of outcomes not subject to attack as arbitrary and capricious grows, so that inevitably some BLM decisions that would have been arbitrary and capricious under a prescriptive standard would fall within the range of what is reasonable because the entire process now contemplates more discretion on the part of the authorizing officer.

We recommend that BLM return to the prescriptive format previously in use, such as that contained in the 1998 NE NPR-A ROD. Sadly, that option does not appear to be on the table. Instead, the Draft EIS proposes to institutionalize performance-based measures thrust upon us during the harried and unprecedented overhaul of the late Bush years. We object, again.

1. We Applaud Those Stipulations That Limit Discretionary Exceptions.

This Draft EIS, however, offers possibilities for reining in excessive administrative discretion.[107] Our main complaint with performance based measures has always been that the BLM Authorizing Officer (AO) has an inordinate amount of discretionary authority to "approve" activities that might not have passed muster under stricter prescriptive approach. This was manifested in two ways. First, this discretion was built into the nature of the management structure as an inherent part of the AO's authority to approve procedures because they "achieved" certain objectives.[108] Such a standard is often heavily subjective. The current Draft EIS appears to limit this authority considerably by authorizing waivers, exceptions, or modifications only when "the authorized officer determines that the factors leading to the stipulation's inclusion in the lease have changed sufficiently to make the protection provided by the stipulation no longer justified and if the proposed operation would still meet the objective stated for the stipulation."[109] If this is the new standard by which BLM intends to evaluate exceptions, then we applaud that move. By changing the standard for comparison from "achieving the same objective" to a more definitive comparison of changed factual circumstances on the ground, this rule appears to more appropriately constrain the existing, amorphous discretionary exception authority.

Another discretionary loophole under many of the old stipulations was an exception clause in the ROP itself. Former D-1 of the NW Plan, for example, prohibited exploratory drilling in certain waterbodies unless it was "determined that there is no feasible or prudent alternative."[110] This is a classic example of an exception that can swallow the underlying rule, and we support eliminating that language from all of the stipulations.

Likewise, we support BLM's decision to consolidate and make consistent the BMPs/standards that applied significantly weaker protection to the Northwest planning area. Although consistency may not be a good enough reason to justify amending and combining these areas for planning purposes, we agree that, for example, former Northwest D-2 needs to be eliminated. This rule provided almost no surface protection because it prohibited all but temporary facilities for exploratory drilling "unless" permanent facilities were "environmentally preferable or necessary to carry out exploration more economically." In other words, temporary facilities only, unless it is cheaper to make them permanent. Eliminating as many of these discretionary exceptions as possible will help in alleviating our concerns over the performance- based system.

2. Other Mitigation Measures Need More Explanation.

[15.032] Other parts of the mitigation measures require somewhat more analysis in the Final EIS. Throughout the effectiveness sections of the Draft EIS, we find statements such as "Required Operating Procedure E-1 would be effective in protecting wildlife resources by requiring that all roads be designed, constructed, maintained, and operated to create minimal environmental impacts."[111] There are two major flaws with this kind of "analysis." First, it is quite simply not analysis. Statements of opinion regarding the effectiveness of certain stipulations do not qualify as analysis. Second, it is entirely circular and provides absolutely no guidance whatsoever. All it says is that the goal to be achieved will be achieved because the lessee will be required to achieve the goal.

Stipulation E-5 is similar. The goal is to "minimize impacts of the development footprint." In order to do that, operators must design and locate their facilities so as "to minimize the development footprint." That's it – that is the rule, along with a short list of factors that are "to be considered." In the Alternatives analyses, we find the same kind of conclusory statement regarding how effective this particular "rule" will be: "Required Operating Procedure E-5 would reduce the overall direct loss of habitat to development."[112] These rules do not provide any way to determine whether efforts to achieve the goals will be successful. They provide no real guidelines that we can support or criticize because there is literally no substance at all to the rules. They simply state a goal, say that it will be achieved by making sure that the goal is achieved on a case-specific basis, and then confidently assert that the goals will be achieved, thereby taking credit for setting a strong regulation that cuts down on impacts. You can't count on any benefits accruing just because you set a goal and say you are going to meet it. Therefore,

the Draft EIS should not be asserting any conclusions related to these circular regulations, and should not be claiming that impacts will be limited because of the regulation's mere existence.

This is especially problematic and frustrating when it comes to regulations that provide for "consultations" with affected communities. **[15.033]** There seems to be substantial disagreement about the effectiveness of consultations. BLM believes that such meetings provide a good environment and mechanism for working out the details of industrial proposals and projects, where we get to influence the decision that is made. But when you say "consultation," in our experience it often means that we are being informed of the decision that has already been made. "Consultation" should mean gathering input from those affected in time for that input to shape the decision. So, for example, BMP E-1, discussed above, is not made any better by its requirement to "consult" with affected communities before building a road through our resource lands. Nor do BMPs H-1 and H-2, the standalone consultation requirements, give us any reason to think that our voices will be heard just because there is a process BLM and industry are supposed to use to tell us what they plan to do.

Impacts to us and our community – the very people who are supposed to benefit from these consultation requirements – are not minimized by our being better informed about decisions that have already been made, or which are going to be made regardless of what we think. Conclusions in the Draft EIS, most notably in the ANILCA Section 810 analysis, that "subsistence consultation with directly affected subsistence communities" will be "adequate ... to ensure that significant restrictions to subsistence uses and needs would not occur" are arrant nonsense.[113] It continues to outrage us that after years of marginalizing and ignoring us on so many macro-level planning decisions, federal planners continue to pat themselves on the back for "consulting" with us about their actions. We certainly are not convinced that consultation gives us anything in substantive terms. Many of the real concerns of the local people affected by the BLM's decisions continue to go unheard.

VI. CONCLUSION

We ask that BLM continue to take input from the affected communities in the course of this planning process. We most particularly want an opportunity to comment on BLM's Preferred Alternative.

Thank you for your time and attention.

KUUKPIK CORPORATION
Isaac Nukapigak President

NATIVE CITY OF NUIQSUT
Margaret Pardue Acting President

CITY OF NUIQSUT
Thomas Napageak, Jr. Mayor

[1] The Avoidance effect has been documented by a number of scientists and researchers, where Native subsistence hunters harvest virtually no game within a five mile radius of oil and gas facilities, and dramatically reduced amounts of game within a sixteen mile radius. These areas are effectively eliminated from each community's available subsistence range or at least made much less valuable than they historically had been.
[2] V.2, p. 475.
[3] Id. and Table 14.
[4] A potential pipeline for Chukchi production is potentially within a closer time frame, but such a pipeline would be the subject of its own EIS process. This Draft EIS hardly begins to come to grips with the potential impacts.
[5] V.3, p. 32 (Bureau of Ocean Management estimate).
[6] Id. at 35.
[7] Id. at 31. The fact that the Umiat Road would be almost entirely outside the NPR-A is no

justification for ignoring its cumulative effects on residents and communities inside NPR-A.
[8] Id. at 33.
[9] Badami has been such a bust from a production standpoint that it has been mothballed for much of the period since it was developed. BP, it's original developer, has sold most or all of its interest in Badami. So Badami's history of ice road usage is not typical or useful in projecting impacts in NPR-A.
[10] See, e.g., Figure 4-28 of BLM's Draft Supplemental EIS for the NE NPR-A, on which we submitted comments on November 6, 2007.
[11] NSB Planning Commission Resolution No. 95-05, endorsing Nuiqsut Paisanich, A Cultural Plan, (Arctic Environmental Information and Data Center-under the auspices of the North Slope Borough 1979), p. 25. "Paisanich" means "heritage."
[12] ASDP FEIS, p. 3-303.
[13] Nuiqsut Profile subsection, p. 28.
[14] Final EIS, p. 4A- 615.
[15] 2003 Census, p. 34.
[16] Id.
[17] Id.
[18] Id., Nuiqsut Profile, p.2.
[19] See, e.g., V.2, p. 157 ("If predicted shifts in physical and chemical characteristics of the environment occur with climate change, impacts on fish from oil and gas activities under Alternative A could be greater or less than expected. The magnitude of shifts in these habitat characteristics will ultimately determine this."). This type of "analysis" adds nothing beyond increasing the page count of the Draft EIS. If that were an isolated example, that comment might be unfair, but it's not. Almost all mitigation discussions, for example, simply state that the mitigation measure "will be effective" without any discussion of how or why that may be the case, and in some cases BLM acknowledges that it cannot even state that level of confidence. See, e.g., v.2, p. 154 ("Although only speculative, in principal these setbacks should be effective in reducing the incidence of foreign materials (e.g., sediment or pollutants) reaching surface waters.").
[20] V.2, p. 476.
[21] Why even include the Southern portion in this study when all it does is distort percentages and allow BLM to claim credit for "setting aside" an area that is "set aside" in every alternative and which holds minimal known reserves in any event? It would make far more sense to leave this area out entirely and undertake planning on it later, as more is learned from development in the Northeast and Northwest.
[22] V.3, p. 155.
[23] See V.2, p. 435 ("The impact of non-oil and gas activities is greatly dependant on the time and place of said activities.").
[24] V.2, pp. 435, 545, 654.
[25] Appx. A, p. 12, 14, 16, 20.
[26] V.4, p. 292.
[27] Kuukpik and KSOP's March 31, 2003 letter, p. 6 -7; Kuukpik and KSOP's April 2, 2003 letter, p. 7.
[28] 2008 Northeast NPR-A FEIS, pp. 3-135–136.
[29] V.1, p. 400 - 402.
[30] Somehow, basic statements of fact like this one in the Affected Environment Section are morphed into "observations" by Nuiqsut's residents in the Environmental Consequences Section. See, e.g,. V.4, p. 298 "Nuiqsut residents observe direct connections between the general well- being of their community and subsistence harvests." This change from "fact" to "perceptions" downplays the impacts of oil and gas development on Nuiqsut. Additionally, we note that BLM's response to our previous criticism regarding this exact same problem in previous EIS's (see NE Amended Draft EIS (2004), p.4-145), has simply been to change the language so that Nuiqsut residents now "observe" negative effects, rather than "perceive" them as they used to. Changing a word does not change the point we raised previously: BLM should

not be treating facts as anything other than facts, and it should state the anticipated impacts accordingly.
[31] See e.g., V.1, p. 402 (regarding Alpine's unknown effects on nearby herds); V.3, p. 228 (effects of roads generally unknown); V.3, p. 233 (footprint acreage is listed, and avoidance acknowledged, but no guess is made regarding the "avoidance footprint").
[32] See e.g., Appx. A, p. 17 (discussing "acreage" disturbed without accounting for increased acres taken off limits by avoidance). Avoidance is only mentioned by name once in the entire ANILCA Section 810 Analysis. Id. at 23.
[33] Kuukpik's Board of Directors unanimously passed a Resolution opposing the Umiat Road in September, 2011. A copy of that Resolution is Attachment 1 to this Letter. See, e.g., V.3, p. 228.
[34] V.3. pp. 227-229.
[35] V.3, p. 31.
[36] Id.
[37] Appx. A, p. 27.
[38] Appx. A, p. 26.
[39] V.2, p. 185.
[40] V.2, p. 185; V.3, p. 31.
[41] V.2, p.186; V.3, p. 156.
[42] Id.
[43] V.3, p. 147.
[44] V.3, p. 31
[45] See Section IV(B)(1)(a) above.
[46] Ironically, one side effect of the Umiat Road would be to alleviate some of the shipping that presently causes so much traffic and disturbance along the northern coast of the NPR-A. See V.4, p. 210.
[47] V.1, pp. 408-409.
[48] V.3, p. 231.
[49] V.3, p. 231.
[50] V.3, p. 234.
[51] V.3, pp. 203-205.
[52] V.3, p. 231.
[53] V.3, p. 234.
[54] V.1, pp. 93-94 (Stipulation K-9).
[55] Appx. A, p. 27. Contrast this likely true statement with the prior note regarding coastal development from the "cumulative impacts" section asserting that very little coastal impact will occur:

> Offshore development associated with leases in the Chukchi and Beaufort seas could impact relatively small areas along the coast for staging and storage of materials, and could impact a swath across the entire mid-section of the NPR-A if a road and pipeline is built from the Chukchi Sea to the Trans-Alaska Pipeline System. V.3, p. 155.

[56] V.2, pp. 185-189.
[57] V.3, p.150. ("The reduction in calving habitat use near oil development facilities could eventually limit the growth of the Arctic caribou herds within their present ranges and prevent the herds from reaching the maximum population size that they could achieve without the presence of development."). By contrast, the Draft EIS states elsewhere, and more realistically:

> Functional loss of habitat as a result of displacement due to disturbances, could involve a much greater area. Given that the area most likely to be developed for oil under the action alternatives (economic zones 110 and 120, section 4.2.1.2. "Discovery and Development" (Volume 2) includes the most important calving and insect-relief habitat for Teshekpuk Caribou Herd caribou, impacts to caribou, other mammals, and their habitats could be much greater than predicted based solely on amount of area disturbed.

See Section IV(A)(1) above.
[58] V.3, p. 144.
[59] V.3, p. 147.
[60] Id.
[61] V.3, p. 157. We also can't help but note again here that as soon as it looks like BLM might go ahead and give us some analysis of the likelihood of such increased impacts, and where they might be expected to occur, we instead get the following analysis: "This possibility is most likely under Alternative D and least likely under Alternative B."
[62] Appx. A, p. 27.
[63] V.3, p. 229 (emphasis added).
[64] V. 3, p. 230.
[65] V.3, pp. 33, 100, 147.
[66] V.3, p. 147.
[67] Appx. C.
[68] "Most notable among future effects [on subsistence resources] will be (1) those caused by the potential development of offshore oil and gas reserves, particularly if onshore facilities to accommodate that include pipelines that transverse to NPR-A to connect with Trans-Alaska Pipeline System; and (2) the ongoing impacts of climate change which are likely to continue and intensify." V.1, p. 114. See also V.3, p. 96 ("In the long term, global climate change may have a greater and more persistent effect on vegetation on the North Slope than oil and gas activities."). [69] V.1, p. 116.
[70] V.1, p. 120; V.3, p. 104.
[71] V.3, p. 78 (emphasis added).
[72] V.3, pp. 85, 111.
[73] 2008 ROD, pp. 2-3.
[74] 2008 ROD, p. 67.
[75] Id.
[76] Mayor Edward Itta to Jim Ducker (BLM), October 1, 2010, p.2.
[77] V.2, p. 186.
[78] V.3, p. 156.
[79] D. Yokel, A. Prichard, et al., Teshekpuk Caribou Herd Movement through Narrow Corridors around Teshekpuk Lake, Alaska, p. 66 (Dec. 2009) in the Alaska Park Science, V.8, Issue # 2. [80] V.3, p. 155. The study relies on this same analysis to emphasize the area's importance with regard to birds (V.3, p. 137), special status species (V.3, p. 185), and subsistence resources (V.3, p. 233).
[81] V.3, p. 157. The Draft EIS says that the impacts would "as long as the life of the oil and gas fields (which is probably 30 to 40 years). That is overly optimistic. The reality is these impacts would probably last far longer than just the 30 or 40 life of the field and the multi-year period of intense activity during decommissioning of each oil and gas field. Recovery would then take additional years.
[82] Dau and Cameron 1986 (Draft EIS V.4, p. 144).
[83] G.M. Carroll, Management Report of Survey-Inventory Activities, M.V. Hicks (editor). Alaska Department of Fish and Game, 1999, p. 213.
[84] Id. at 289.
[85] These studies make particularly inexplicable another statement in the Draft EIS:

> The reduction in calving habitat use near oil development facilities could eventually limit the growth of the Arctic caribou herds within their present ranges and prevent the herds from reaching the maximum population size that they could achieve without the presence of development. V.3, p. 150.

The statistics for these two years are consistent. Continued for any period of time they would not just limit growth of the herd, but cause substantial reductions in herd size. Put another way, evidence that Teshekpuk Lake Caribou Herd calf survival rate is between 3.6 and 9 times

less likely if animals calve outside the usual calving area cannot rationally be twisted into terms of "growth" that "could" be reduced and a "maximum population size" not being achieved. It means the herd will suffer and decline, probably dramatically if these rates continued.
[86] V.3, p. 150.
[87] V.3, p. 157.
[88] 2008 ROD, p. 9.
[89] These quotes and studies concern caribou, while the current purpose of the Teshekpuk Lake Special Area is waterbird habitat. Where major negative impacts to a critical resource are concerned, we think this information is just as pertinent to the question of whether the deferrals should be continued. First, the 2008 ROD also required caribou studies which haven't been performed. Second, the Draft EIS considers whether the purpose of the Teshekpuk Lake Special Area should be expanded to include caribou habitat. It should be so expanded, and this data independently supports a deferral.
[90] If an indefinite deferral is not a legally or practically available option for some reason, our first fallback would be extending the deferral for an additional ten years. Failing that, rather than seeing the area opened for leasing after 2018 in spite of inadequate studies and science, we would opt for a "No Lease" designation, recognizing that that determination could be revisited by a future administration at a point where there might then be enough new studies and data and enough changes in available technologies and practices that perhaps we could support leasing at that time.
[91] Appx. A, p. 10.
[92] Id. at 13, 17, 20 (D at 25)
[93] Id. at13.
[94] V.3, p. 156.
[95] Map 2-3, Stipulation K-5a.
[96] V.2, p. 185.
[97] V.2, p. 185 (Citing Person et al. 2007)
[98] See Appx. A, p. 15 ("Precluding construction of permanent facilities, such as pipelines, roads, and production pads, within the narrow caribou movement/migration corridors located both to the east and the west of Teshekpuk Lake reduces the risk of displacement of the Teshekpuk Caribou Herd and of dramatic shifts in the current use-area of the caribou.").
[99] Presumably this pipeline would be part of the Beaufort Sea pipeline system. Since BOEM estimates that this system could require approximately 375 miles of pipelines, it is reasonable to conclude that a significant amount of pipeline would be in the movement corridors, constricting movement to an as-yet unknown degree. If this development ultimately occurs, we will need to craft appropriate mitigation measures to facilitate movement. Studies regarding effectiveness of elevated pipelines in allowing winter migration have not yet been conducted on the North Slope. See Draft EIS, V.2, p. 190. It therefore makes sense to be very cautious in protecting these critical areas.
[100] Stipulation D-1; V.1, p. 51; V.2, p. 143.
[101] V.2, p. 155, V.3, p. 117.
[102] V.2, p. 146.
[103] See sections 4.3.7 and 4.3.13 for example.
[104] 4.7.7.7.
[105] V.1, p. 386.
[106] V.1, p. 388.
[15.034] [107] BLM uses the terms stipulation, required operating procedures, and best management practices frequently, and while we understand that the distinction between terms is largely based on whether the requirement applies to a lease or non-lease activity, it is still not entirely clear what the practical difference is and why BLM is being so careful to distinguish between them at all. The Draft EIS even says that "Best management practices" is just "the term that the BLM is using instead of required operating procedures." V.1, p. 29. If the change is not purely cosmetic, then the Final EIS should do a better job of explaining the reason for the change and how it intends to apply each of these standards, whatever they are called.

[108] See Northeast NPR-A 2008 Supplemental IAP/EIS, p. 2-16.
[109] V.1, p. 29.
[110] D-1 under Northwest Plan; compare, e.g., K-2 under Alternative A with Alternatives B,C, and D (eliminating the "unless" clause).
[111] V.2, p. 198.
[112] V.2, pp. 198, 385.
[113] Appx. A, pp. 17, 20.

Kuukpik Corporation

Resolution Number 11-36
A Resolution Opposing the Road to Umiat that has been Proposed by the State of Alaska

Whereas, in order to promote oil and gas development, the State of Alaska has proposed to build a road form the Dalton Highway to Umiat along one of three alternative routes and is currently studying those alternative routes;

Whereas, the caribou of the Central Arctic Herd are one of the main food sources of the residents of Nuiqsut, Alaska, and anything that harms the Central Herd, reduces its numbers, or diverts the migratory path of the Central Herd away from Nuiqsut would cause major and immediate harm to the residents of Nuiqsut and to their subsistence lifestyle and culture;

Whereas, 90 to 95 percent of the residents of Nuiqsut are Kuukpik shareholders, married to Kuukpik shareholders or descended from Kuukpik shareholders, so that harm to the residents of Nuiqsut or to their subsistence lifestyles is harm to Kuukpik shareholders;

Whereas, each and every one of the State's three proposed routes would create a physical barrier to the migration of the Central Herd, which would divert the Central Herd and possibly harm the health of the Central Herd and reduce its numbers;

Whereas, the expenditure of public funds for any road to Umiat will require and inevitably lead to opening of that road to the public and thus to easy and extensive sports hunting access to the Central Herd along the road route, as has occurred on the Dalton Highway;

Whereas, with public access, sports hunters would be reducing the population of the Central Herd and competing with the residents of Nuiqsut for the caribou which are such an essential part of the subsistence lifestyle of Nuiqsut and Kuukpik shareholders and their families;

Whereas, the state's proposed road to Umiat would also give sports hunters easy and extensive public access to other vital subsistence resources including moose, wildfowl, fish and all other wildlife resources, which would reduce other parts of Nuiqsut's subsistence food resources just when the number of available caribou was already declining;

Whereas, such negative impacts would extend directly and indirectly to all other North Slope communities, directly in the case of Anaktuvuk Pass, for example, and indirectly in the case of all such communities given the impacts that shortage of caribou and other game would have on traditional sharing of subsistence resources among communities and families across the North Slope;

Whereas, Nuiqsut has already been heavily impacted by oil and gas development and the residents of Nuiqsut uniformly oppose the proposed Umiat road; and

Whereas, permitting such harmful impacts on the traditional subsistence lifestyle of both Nuiqsut and the Native people of the North Slope of Alaska would be contrary to the duties and obligations of the State to protect and preserve the health, welfare and safety of the people of Nuiqsut and the North Slope;

NOW, THEREFORE, BE IT RESOLVED,, that Kuukpik Corporation ,on behalf of itself, its shareholders and the community of Nuiqsut hereby states its complete opposition to further

finding for and the construction of any of the States' proposed alternative roads from the Dalton Highway to Umiat;

BE IT FURTHER RESOLVED that Kuukpik Corporation joins with the other communities of the North Slope in vigorously petitioning Governor Sean Parnell of the State of Alaska and the Alaska Legislature to terminate all further work on or funding for the proposed road from the Dalton Highway to Umiat;

AND BE IT FURTHER RESOLVED, the communities of the North Slope recommend, request and advise the Governor and the State of Alaska that any future proposed projects impacting our subsistence resources should be presented to and discussed with the affected communities at the earliest stages of the consideration of such projects, prior to the expenditure of any significant public funds on such projects.

PASSED THIS 29TH DAY OF SEPTEMBER, 2011 BY AN UNANIMOUS VOTE OF ALL NINE MEMBERS OF THE KUUKPIK BOARD OF DIRECTORS
Isaac Nukapigak, President
Leonard Lampe, Secretary

[Response to 15.001]
The relationship between the current plan and past plans and the geographic scope of the current plan is described in Chapters 1 and 2. Map 2-1 illustrates the boundaries of the previous planning efforts. Additional assumptions regarding the scenarios for development, some of which differ from those in previous plans (e.g., different oil and gas prices and resultant development scenarios) are described in Chapter 4, particularly sections 4.2.1 and 4.7.2 through 4.7.4. The BLM considers the analysis undertaken in this plan to be appropriate and sufficient.

[Response to 15.002]
The impact analysis provides suitable specificity of analysis for broad scale management decisions, such as determinations of what lands to make available for leasing. The plan describes impacts in the context of the environment, such as types of habitat and size of species population. Site-specific analysis will occur when BLM receives an application to approve an action on the ground.

[Response to 15.003]
Impacts to subsistence resources and access is discussed in section 4.7.7.13. Any project such as a pipeline will, when it is proposed, also be subject to its own Environmental Impact Statement.

Vol. 1, Chap. 3, Section 3.4.3.4, "Subsistence User Avoidance of Developed Areas," is a detailed discussion of this issue to which the comment author's specific contentions of area avoided have been added.

Vol. 3, Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities, also discusses this subject.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. That conclusion has been modified to include a paraphrase of the comment author's statement on potential area that would be effectively unavailable. Similar wording has been added to the ANILCA 810 evaluations of Alternative D and the Cumulative Case and to the analysis of the preferred alternative.

[Response to 15.004]
Based upon the USGS's analysis of economically recoverable undiscovered oil and gas in NPR-A, and the USGS's analysis of how these comparatively small accumulations would be developed, the BLM in consultation with the USGS provided scenarios of the level of road development that is reasonably foreseeable. That discussion is in section 4.2.1.2 under the section titled "Oil and Gas Exploration and Development Activities."

[Response to 15.005]
Vol. 1, Chap. 3, Section 3.4.3.4, "Subsistence User Avoidance of Developed Areas," is a detailed discussion of this issue to which the comment author's specific contentions of area avoided have been added.

Vol. 3, Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities, also discusses this subject.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. That conclusion has been modified to further address this concern and similar wording has been added to the ANILCA 810 evaluations of Alternative D and the Cumulative Case and to the analysis of the preferred alternative.

[Response to 15.006]
The impact analysis provides suitable specificity of analysis for broad scale management decisions, such as determinations of what lands to make available for leasing. Site-specific analysis will occur when BLM receives an application to approve an action on the ground.

[Response to 15.007]
The impact analysis statement is correct. Unabridged it states: "It is assumed that impacts to soils would occur in proportion to their occurrence within the NPR-A. However, precluding development in a large block in the south of the NPR-A would disproportionately conserve gravel resources and their vegetative communities." That is, that because there is uncertainty about where precisely development would occur, the general assumption is that different types of soils would be affected in proportion to their prevalence. The following sentence, however, does exactly what the commenter notes should be done; it clarifies that under the alternative much of the southern part of the reserve would disproportionately protect gravel and the vegetative communities associated with gravel.

[Response to 15.008]
The impact analysis provides suitable specificity of analysis for broad scale management decisions, such as determinations of what lands to make available for leasing. Site-specific analysis will occur when BLM receives an application to approve an action on the ground.

[Response to 15.009]
The impact analysis provides suitable specificity of analysis for broad scale management decisions, such as determinations of what lands to make available for leasing. Site-specific analysis, including on the areas likely to be avoided and the total acreage that would be avoided, can more realistically be provided when BLM receives an application to approve an action on the ground.

Section 3.4.3.4, Subsistence User Avoidance of Developed Areas, is a detailed discussion of this issue to which the comment author's specific contentions of area avoided have been added.

Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities, also discusses this subject.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. That conclusion has been modified to include a paraphrase of the comment author's statement on potential area that would be effectively unavailable. Similar wording has been added to the ANILCA 810 evaluations of Alternative D and the Cumulative Case and to the analysis of the preferred alternative.

[Response to 15.010]
The impact analysis provides suitable specificity of analysis for broad scale management decisions, such as determinations of what lands to make available for leasing. Site-specific analysis, including on the areas likely to be avoided and the total acreage that would be avoided, can more realistically be provided when BLM receives an application to approve an action on the ground.

[Response to 15.011]
Vol. 1, Chap. 3, Section 3.4.3.4, Subsistence User Avoidance of Developed Areas, is a detailed discussion of this issue to which the comment author's specific contentions of area avoided have been added.

Vol. 3, Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities, also discusses this subject.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. That conclusion has been modified to further address this concern and similar wording has been added to the ANILCA 810 evaluations of Alternative D and the Cumulative Case and to the analysis of the preferred alternative.

[Response to 15.012]
Vol. 1, Chap. 3, Section 3.4.3.4, Subsistence User Avoidance of Developed Areas, is a detailed discussion of this issue to which the comment author's specific contentions of area avoided have been added.

Vol. 3, Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities, also discusses this subject.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. That conclusion has been modified to further address this concern and similar wording has been added to the ANILCA 810 evaluations of Alternative D and the Cumulative Case and to the analysis of the preferred alternative.

[Response to 15.013]
Vol. 1, Chap. 3, Section 3.4.3.4, Subsistence User Avoidance of Developed Areas, is a detailed discussion of this issue to which the comment author's specific contentions of area avoided have been added.

Vol. 3, Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities, also discusses this subject.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. That conclusion has been modified further address this concern and similar wording has been added to the ANILCA 810 evaluations of Alternative D and the Cumulative Case and to the analysis of the preferred alternative.

[Response to 15.014]
Vol. 1, Chap. 3, Section 3.4.3.4, Subsistence User Avoidance of Developed Areas, is a detailed discussion of this issue to which the comment author's specific contentions of area avoided have been added.

Vol. 3, Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities, also discusses this subject.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. That conclusion has been modified to further address this concern and similar wording has been added to the ANILCA 810 evaluations of Alternative D and the Cumulative Case and to the analysis of the preferred alternative.

[Response to 15.015]
Vol. 1, Chap. 3, Section 3.4.3.4, Subsistence User Avoidance of Developed Areas, is a detailed discussion of this issue to which the comment author's specific contentions of area avoided have been added.

Vol. 3, Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities, also discusses this subject.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. That conclusion has been modified to further address this concern and similar wording has been added to the ANILCA 810 evaluations of Alternative D and the Cumulative Case and to the analysis of the preferred alternative.

[Response to 15.016]
The BLM has considered the suggestion. The BLM does not manage the banks of the Colville River at Nuiqsut or the lands below the highest high water through much of the river's length. Prohibition of permanent new non-subsistence infrastructure as required in some action alternatives, which would include boat launches, would apply to all of the Colville River in which the BLM manages both banks.

[Response to 15.017]
The impacts from increased competition that would likely occur should a road to Umiat be constructed (on a route other than the Meltwater route) are presented in Vol. 3, Chapter 4, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities: Umiat Road and Pipeline (and the Sociocultural and Environmental sections of the same chapter). This section describes those likely impacts and the opposition to the road by the Naqsragmiut Tribal Council, the Anaktuvuk Pass City Council, and the North Slope Borough Fish and Game Management Committee. The text has been edited to include the Kuukpikmiut's specific concerns over increased competition including from outside access to the Colville River.

[Response to 15.018]
The IAP/EIS impact analysis has been modified to take note of the potential for impacts to inter-village relations because of increased subsistence harvest competition.

[Response to 15.019]
The scientific data are not currently available to conduct quantitative or qualitative analysis of projected impacts on bowhead migrations and access to whales for subsistence purposes. Such data, however, is not essential to making an reasoned choice among the alternatives of this plan. Studies by Blackwell et al. on calling behavior of migrating bowheads in the vicinity of Northstar, survey data collected during BWASP (NMFS/MMS/BOEM's Bowhead Whale Aerial Survey Program) along the Beaufort Sea coast, and the recent satellite tracking data collected by the Alaska Department of Fish and Game[2] are greatly enhancing our scientific understanding of bowhead whales movements and behavior in the waters offshore of the NPR-A. Enhanced tracking of vessels in the area would be needed to facilitate delineating corridors

[2] http://www.adfg.alaska.gov/index.cfm?adfg=marinemammalprogram.bowhead

and regions of potential disturbance. Potential Mitigation Measure H-1 is designed to mitigate impacts to the fall bowhead whale subsistence hunt.

[Response to 15.020]
The BLM engages in regular consultation with North Slope representatives on a wide range of land management issues both within and separate from the planning process. Moreover, the preferred alternative would prohibit pipelines in the specific area of concern, so this particular land management issue would be moot.

[Response to 15.021]
The impact analysis in the Final IAP/EIS provides suitable specificity of analysis for broad scale management decisions, such as determinations of what lands to make available for leasing. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure. The current plan makes no decisions on such infrastructure, except to prohibit it in specified areas of particularly high value surface resources.

[Response to 15.022]
There are many levels of impacts, from none to negligible to severe, and they can occur to individuals or to populations. In this analysis, impacts of concern are those with adverse consequences to populations. Since such impacts are not certain, the word "could" was used in the statement.

[Response to 15.023]
The impact analysis in the Final IAP/EIS provides suitable specificity of analysis. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure. The current plan makes no decisions on such infrastructure, except to prohibit it in specified areas of particularly high value surface resources.

[Response to 15.024]
The IAP/EIS correctly acknowledges the range of potential impacts of Chukchi infrastructure, including that involving a road.

[Response to 15.025]
The BLM considered Kuukpik's comments in the course of developing the preferred alternative.

[Response to 15.026]
Competent scientific studies of the baseline environment in the planning area are ongoing. Although it is not possible to know with certainty whether mitigation measures will be sufficient, the BLM regulation process in recent decades has been predominantly successful. Furthermore, continued monitoring of oil and gas activities is standard.

[Response to 15.027]
The intent of allowing pipeline construction in the area mentioned was to allow the movement to market of oil produced on BLM lands north of Teshekpuk Lake, which would be possible under some but not all alternatives. The intent was not to establish a pipeline corridor for oil produced offshore. The actual route of a pipeline for offshore oil is speculative at present, given that there have been no such discoveries. Nonetheless, it is likely that any pipeline through that area would have an effect on caribou which is why the BLM would consult with other stakeholders to find the least impactful route. It is intended that this and other mitigations would keep any impacts to a minimal level. The preferred alternative would prohibit infrastructure, including a pipeline, through lands east of Teshekpuk Lake.

[Response to 15.028]
The IAP/EIS discusses ephemeral streams and their importance for fish in section 3.3.4. Section 3.3.4.5 also discusses the complex and uncertain relationship between climate change, permafrost melting, and lake-stream connectivity on fish habitat.

[Response to 15.029]
There are more than 15,000 lakes greater than 10 acres in the NPR-A, the size that is used as a practical breakpoint for lentic (i.e. non-flowing) waterbodies likely to provide fish habitat. See Chapter 3, Fish, NPR-A Fish Habitat Units for a discussion of utilizing this breakpoint and the table in the same section titled "Extent of potential fish habitat in NPR-A fish habitat units", which describes and acknowledges that the distribution of likely fish-bearing lakes (i.e. lakes greater than 10 acres) is not consistent across the NPR-A. Data on fish presence or absence is available for less than approximately 10 to 15 percent of these 15,000 lakes. Further complicating this topic is the fact that liquid water availability is not equal in all lakes throughout the annual hydrologic cycle, as fishless lakes are primarily shallow lakes (less than 7 feet - see Chapter 3, Fish, Fish Habitat) which freeze relatively early in the winter and are not available to provide liquid water later in the winter. The commenter is correct that in some cases industry is able to reduce the risks of water use to fish habitat by utilizing non-fish bearing lakes, when available. However, given the limited data availability relative to the total number of lakes in the NPR-A and the complexities associated with this aspect of oil and gas operations, using the number of expected oil and gas production pads under each alternative as an index of required year-round water demand, for example, is a practical and justified approach for describing and comparing the potential extent and risk of each alternative and applies equal uncertainty to the value assigned to each alternative.

[Response to 15.030]
The analysis of direct and indirect impacts on fish has extensive citations to peer-reviewed scientific literature to support the wide range of potential effects of oil and gas activities on fish, including many studies that were conducted in the Alaskan and Canadian Arctic. The analysis incorporates a consideration of impacts to physical, chemical, and biological ecological components that may then have a resulting effect on a large number of fish found in the NPR-A, including 10 freshwater species, 14 anadromous species, and 6 (most commonly encountered) coastal marine species, which are listed in Table 3-18 within section 3.3.4. Considering the potential effects on each of these species individually would exceed the scope of analysis for an EIS, and each of these species are discussed, as related to their extent and presence within the NPRA, within section 3.3.4. The discussion of cumulative effects on fish follows the same line of analysis taken for the direct and indirect impacts analysis.

[Response to 15.031]
The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques. See section 2.3.5 for further discussion of the applicability of stipulations and best management practices.

[Response to 15.032]
The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques. See section 2.3.5 for further discussion of the applicability of stipulations and best management practices. The discussion of the effectiveness of stipulations and best management practices identifies those protective measures that can reduce impacts and the adaptive management strategy maximizes the effectiveness of the stipulations and best management practices.

[Response to 15.033]
The BLM is committed to coordinating and consulting regularly with tribal governments to identify and consider their concerns in BLM land use planning and decision making. In addition to the requirements of government-to-government consultation and ANILCA, the BLM Arctic

Field Office coordinates the NPR-A Subsistence Advisory Panel expressly for the purpose of gathering input and recommendations from residents before oil and gas activities occur.

[Response to 15.034]
Section 2.3.5 explains that the distinction between stipulations and required operating procedures/best management practices. It explains that the shift from required operating procedures to best management practices is a change in terminology, not an underlying approach.

COMMUNICATION NUMBER 16
June Childress, President
Olgoonik Corporation

June 14, 2012

Mr. Jim Ducker
US DOl BLM Alaska State Office
222 West Seventh Avenue, #13
Anchorage, Alaska 99513-7599

Via Fax to AECOM 866-611-9420

Dear Mr. Ducker:

Olgoonik Corporation (the Alaska Native Claims Settlement Act Corporation Village Corporation for the Village of Wainwright, Alaska) is owned by 1174 Wainwright, Alaska Native (lnupiaq) shareholders and is the owner of over 175,000 acres of surface estate lands surrounding the village of Wainwright within NPRA.

Within the draft IAP/EJS, BLM requests comments useful and specific to identifying new information that will have bearing on the analysis, inaccuracies, discrepancies or errors of the resources and uses of the planning area, suggestions for improving management direction with the purpose of NPRA and identifying new impacts, alternative or possible mitigation measures.

First and foremost, Olgoonik has requested that the comment period be extended beyond the 60 day comment period which you granted an extension to June 15, 2012. Olgoonik thanks BLM for this extension. However, we have not completed our review of this draft document but will provide comments we have so far to your agency to comply with the Department's requirements as the Record of Decision will affect our lands within the NPRA.

With that in mind, please accept our comments/suggestions:

- **[16.001]** The existing Northwest and Northeast NPRA integrated activity plans defers oil and gas leasing in the northwestern NPRA area from leasing until 2014 and in northeast of Teshekpuk Lake in northeast NPRA until 2018 so that appropriate scientific studies and research is completed to justify leasing and development in those special areas. We suggest that BLM retain this protective measure beyond this time period until BLM can collect wildlife and subsistence data and other pertinent information to justify opening ALL Special Areas now closed to leasing, development and operations as the existing lAP requires BLM to do. The current protective measures offered to wildlife and other resources in these special areas should not be reduced. Leasing in these areas will impact the regions wildlife and subsistence harvesting. When leasing and development is allowed, these activities must be conducted properly and responsibly while protecting our wildlife resources.

- **[16.002]** BLM is proposing to hold one single workshop on a route(s) of a Chukchi and Beaufort Sea pipeline. We suggest that BLM form a working group to address a pipeline and that a series of ongoing meetings to which City, Native Villages and ANCSA village corporations for each affected village, the North Slope Borough and the Arctic Slope Regional Corporate that will affected be invited to participate. We feel that a mandatory invitation to participate should made by BLM.

- **[16.003]** When a pipeline corridor plan is developed to accommodate the needed infrastructure for transporting oil from the Chukchi Sea across NPRA to TAPS, Olgoonik suggests that in special subsistence and traditional use areas including a heavily used caribou migration route in the path of a pipeline, the use of underground pipes or elevating pipelines a minimum of seven feet above ground be considered for the width of the migration path.

- **[16.004]** We suggest that no rivers within NPRA be included in the National Wild and Scenic River Systems. By including rivers in this program, our ownership rights of lands surrounding rivers within our lands could be limited and infringed upon. Our shareholders who utilize lands near rivers for subsistence activities would be eliminated or limited. Including rivers in this program will also limit activities for which NPRA is established for.

- **[16.005]** We suggest increasing the coastal setback within NPRA from 3/4 of mile to one mile.

- The draft IAP/EIS will change the current Standard Operating Procedures to a method that will involve a "best value" practices which are not defined. We feel that the current standard Operating Procedures work fine and do not require changing. Should a different method be implemented, we would like to be involved to comment on the proposed method.

- Although each alternative contained in the draft IAP/EIS will not satisfy everyone affected and with the limited time provided to review the many pages of this document with limited resources, Olgoonik will have recommend Alternative A as its choice for NPRA. I am sure with additional time over the limited 120 days we would be able to provide additional comments

We appreciate the opportunity to comment and thank you for considering these comments. We look forward to working with the BLM as this process progresses.

Sincerely,
OLGOONIK CORPORATION

June Childress
President

[Response to 16.001]
The BLM considered a wide range of alternative. Two alternatives would continue to keep the deferred lands near Teshekpuk Lake unavailable for oil and gas leasing. Two alternatives would retain some of the currently deferred lands in northwestern NPR-A with greatest resource sensitivity as unavailable; other lands in the northwestern deferral area would have other protections (rivers and coast) and under Alternative B-1 substantial lands in the northwestern deferred area would be added to Special Areas.

[Response to 16.002]
Any proposal to develop petroleum resources in the Chukchi or Beaufort Seas will involve a multi-agency NEPA process. At that time the lead agency(ies) will determine the appropriate public process.

[Response to 16.003]
Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure. The current plan makes no decisions on such infrastructure, except to prohibit it in specified areas of particularly high value surface resources.

[Response to 16.004]
Subsistence activities would be eliminated or limited if any rivers were to be designated as components of the National Wild and Scenic Rivers system. The preferred alternative does not recommend any rivers as suitable for designation at this time.

[Response to 16.005]
The preferred alternative provides for a 1-mile setback from the coast for oil well pads and central processing facilities. The BLM, however, has allowed for other infrastructure within a mile of the coast.

COMMUNICATION NUMBER 21
Joseph Liebezeit, Chairperson
Alaska Shorebird Group

Joseph R. Liebezeit, MS
Chairperson
Alaska Shorebird Group
718 SW Alder Street, Suite 210
Portland, OR 97205

24 May, 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99501

Dear BLM representative:

The stated goals of the Alaska Shorebird Group (ASG), established in 1995, are to raise the public's awareness of shorebirds; to promote research, monitoring, management, conservation, and education relevant to shorebirds in Alaska; to provide a forum for the exchange of information about shorebirds among biologists, managers, and the public; and to promote the range-wide management and conservation of shorebirds, which spend part of their lifecycle in Alaska. ASG members include representatives from federal and state agencies, non-government organizations, academia, and the general public.

Because the potential for oil and gas development to impact shorebirds is an issue of concern to our membership, the Executive Committee of the ASG recently convened to respond to the March 2012 Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve-Alaska (NPR-A). The eight-member executive committee unanimously agreed to submit the following position statement, which includes new information on the importance of the NPR-A (particularly the Teshekpuk Lake Special Area) to shorebirds and likely impacts from development.

Background and new information
One of the largest wetlands in the circumpolar arctic, centered on Teshekpuk Lake, is found within the NPR-A. This wetland complex of ponds, lakes, rivers, streams, lagoons and barrier islands provide nesting, feeding and staging habitat for migratory shorebird populations of national and international significance. Shorebirds that utilize the NPR-A use all four major North American flyways and disperse throughout the Lower 48 and many travel much farther, including south and east to Central and South America as well as south and west to Mainland China, Taiwan, Japan, Republic of Korea, Australia, and New Zealand.

The NPR-A includes seven designated Important Bird Areas (IBAs), two of which are identified as having global significance. [1] More than two dozen species of shorebirds breed in the NPR-A, and several sites have been identified as candidates for inclusion in the Western Hemisphere Shorebird Reserve Network. [2]

[Preamble 21.002, 003] Here we briefly list some key findings (and provide accompanying figures) from new studies, not reported on in the BLM IAP/EIS that demonstrate the exceptional value of the NPR-A and its Special Areas for shorebirds that utilize this region as a breeding and staging ground:

[21.001] 1. Andres et al., (in press) [3] recently documented that the highest densities of shorebirds in the circumpolar Arctic are found in the region around Teshekpuk Lake. Approximately 600,000 (10%) of the estimated 6 million shorebirds found across the NPR-A use the Teshekpuk Lake Special Area (TLSA). The highest densities of shorebirds in the Teshekpuk

Lake area are clustered around both the south and north sides of Teshekpuk Lake (Figure 1). Only Alternative B in the BLM IAP/EIS makes unavailable for oil/gas leasing, areas south of the lake.

2. The TLSA supports significant percentages of populations of three species of shorebird: Dunlin (arcticola subspp.) 19%; Black-bellied Plover 10%; and Semipalmated Sandpiper (western population) 10% (Andres et al., in press). These numbers easily qualify this site as a Western Hemispheric Shorebird Reserve Network (WHSRN) of international significance.

3. Overall nest densities of breeding birds (including shorebirds) at two sites in the TLSA (Olak and on the Ikpikpuk River) were significantly higher compared to six other sites located along a 400-km long portion of the Arctic Coastal Plain of Alaska (Liebezeit et al., 2011 [4], Liebezeit and Zack, unpublished; Figure 2).

4. Studies have consistently shown higher nest survivorship for some shorebird species at a site in the TLSA compared to oil-developed sites to the east (Liebezeit et al. 2009 [5], Liebezeit et al. 2011). In the most recent assessment combining long-term data sets from two remote sites within the TLSA and the two largest oilfields (Kuparuk and Prudhoe Bay), shorebirds have higher nest survivorship at TLSA sites compared to oilfield sites (Liebezeit and Zack, unpublished data).

[21.002] 5. Liebezeit et al. (2009) found that two species of shorebirds (Red Phalarope and Rednecked Phalarope) nesting within 5 kilometers of oil and gas infrastructure sustained significantly higher rates of nest predation than nests farther from oil and gas infrastructure. The very high natural variation in and among sites, and between years across the Arctic, precluded further identification of statistical effects on other species. Nonetheless, it is clear that heightened risk of predation near oil and gas infrastructure can have a strong negative impact on nesting migratory birds. This 5 km zone from infrastructure that acts as a strong attractant to predators (either from food or potential nesting and denning sites; see Liebezeit et al. 2009, Table 3) should be incorporated into the BLM plan assessment of environmental consequences including the cumulative impacts section.

6. Wilson et al. (unpublished data) [6] have recently modeled the effects of shorebird nest loss (based on nest density per habitat type data and the 5-km predation-effect-zone documented in Liebezeit et al. 2009 but conservatively modeled by attributing phalarope nest survival to shorebirds as a group) with respect to development scenarios for each BLM IAP/EIS Alternative in the TLSA. These preliminary results suggest only Alternative B provides adequate protection against significant nest loss (Figure 3).

[21.003] 7. The current TLSA harbors important post-breeding shorebirds sites at Pogic Bay and Cape Halkett. In the larger region surrounding Teshekpuk Lake considered for no oil/gas leasing (under Alternative B), are other important sites that host thousands of postbreeding shorebirds (including Cape Simpson, Tangent Point, Peard Bay; Taylor et al. 2010 [7]).

Alternative B is best option
Under the terms of the Naval Petroleum Reserve Production Act (NPRPA) enacted in 1976, Congress transferred management of the NPR-A from the Navy to the Department of the Interior. Congress expressly recognized in the law that the NPR-A has exceptional natural, fish, wildlife (including shorebirds), scenic, cultural, and historical values warranting protection. Congress has provided the Secretary of the Interior broad authority to balance resource development activities with "maximum protection" of special areas in the NPR-A. [8]

To date, four Special Areas have been formally identified by the BLM within the NPR-A: the Teshekpuk Lake Special Area, the Colville River Special Area, the Utukok Uplands Special Area, and the Kasegaluk Lagoon Special Area. Despite the documentation of exceptional ecological values, however, these areas still lack permanent protection. Both oil production and ecosystem protection within the NPR-A can be realized. We strongly encourage you to take decisive action under the new management plan to protect previously identified Special Areas

as well as new Special Areas and extensions to the current ones that the BLM has proposed in Alternative B [9].

"Alternative B" provides an appropriate balance that will allow for substantial additional oil and gas development while also providing meaningful and reliable conservation for the exceptional biological resources of the NPR-A, including key shorebird populations. Adoption of "Alternative B" would provide essential landscape-scale protection in the key areas of the NPRA, especially the coastal plain around Teshekpuk Lake that is dense with breeding and postbreeding migratory birds. We urge you to adopt "Alternative B" as it provides the appropriate balance of wildlife protection and energy development in this largest of public landscapes.

Thank you very much for the opportunity to present new information and our recommendations. If you have need for expertise about shorebirds in any future EIS, we would be very pleased to assist you. My e-mail address is jliebezeit@wcs.org. The ASG secretary is River Gates (hrivergates@gmail.com) and our staff support person is the U.S. Fish and Wildlife Service's Regional Coordinator for shorebirds, Rick Lanctot (richard_lanctot@fws.gov). Questions for the ASG about shorebird conservation in Alaska can be directed to any one of us. We look forward to continued interactions with the Bureau of Land Management in the future.

Respectfully,

Joe Liebezeit, Chair
River Gates, Secretary
Rick Lanctot, Staff support
Alaska Shorebird Group

[1] Currently designated IBAs within the NPR-A: Teshekpuk Lake/East Dease Inlet (global), Elson Lagoon, Cooper
Island, Peard Bay, Kasegaluk Lagoon (global), and the Colville River.
[2] The worldwide populations of many shorebird species have recently declined. Declines are suspected or have been documented for eleven shorebird species that regularly breed on Alaska's coastal plain. Nine of these species have been classified as species of high concern or as highly imperiled at the hemispheric or global level and the majority of the U.S breeding populations of seven species occur on the coastal plain. See Johnson, J., et al, "Distribution of Breeding Shorebirds on the Arctic Coastal Plain of Alaska," Arctic Vol 60. No 3 (September 2007)
[3] Andres, B.A., J.A. Johnson, S.C. Brown, R.B. Lanctot. in Press. Shorebirds breeding in unusually high densities in the Teshekpuk Lake Special Area, Alaska. Accepted for publication in Arctic April 2012.
[4] Liebezeit, J.R., G.C. White, and S. Zack. 2011. Breeding ecology of birds at Teshekpuk Lake: a key habitat site on the Arctic Coastal Plain of Alaska. Arctic 64 (1): 32-44.
[5] Liebezeit, J.R., S.J. Kendall, P. Martin, D. Payer, C.B. Johnson, T. McDonald, A. Wildman, S. Brown, W. Streever, and S. Zack. 2009. Influence of human development and predators on nest survival of tundra birds, Arctic Coastal Plain Alaska. Ecological Applications 19(6): 1628-1644.
[6] Wilson, R., J. Liebezeit, S. Zack. Unpublished data. For more information contact Ryan Wilson, (ryan_wilson@tws.org or Joe Liebezeit, jliebezeit@wcs.org).
[7] Taylor, A.R., R.B. Lanctot, A.N. Powell, F. Huettmann, D.A. Nigro, S.J. Kendall. 2010. Distribution and community characteristics of staging shorebirds on the northern coast of Alaska. Arctic 63: 451-467.
[8] Naval Petroleum Reserves Production Act of 1976. 42 USC § 6504.
[9] In Alternative B, the Teshekpuk Lake Special Area would be expanded to include Dease Inlet/Admiralty Bay, the Utukok Special Area would be expanded to include much of the original southern planning area, and a new Special Area at Peard Bay would be created.

[Response to 21.001]
The BLM recognizes the Teshekpuk Lake Special Area (TLSA) as having exceptional value for shorebirds and this is reflected in the stipulations, best management practices and various land setbacks provided in the plan. Specific wording acknowledging the high densities and high nest survivorship of shorebirds that nest in the TLSA has been added to the text.

[Response to 21.002]
The BLM recognizes the TLSA as having exceptional value for shorebirds and this is reflected in the stipulations, best management practices and various land setbacks provided in the plan. In all alternatives, Required Operating Procedure/Best Management Practice A-2 requires proper disposal of refuse to avoid human-caused changes in predator populations while E-9 requires that structures do not create denning or shelter sites for predators. Text was added to the document to highlight the results of the Liebezeit et al. 2009 study.

[Response to 21.003]
Results from two Taylor et al. (2010) studies are presented in several different sections within the IAP/EIS, an example follows. "A recent study investigating post-breeding concentrations and staging areas of shorebirds in the planning area indicate high levels of connectivity among coastal staging areas, and all staging sites that were studied were used by more than one species throughout the post-breeding period. Individuals captured on nests were found to use staging sites both on the coast near their breeding site and at additional staging sites distant from their breeding sites (Taylor et al. 2010a). These results suggest that shorebirds breeding in the NPR-A rely on multiple, dispersed sites for fall staging, and that a concentration of shorebirds at a given location may represent individuals from a much wider range than the local tundra breeding area. It appears that the northern Alaska coastline is a network of interconnected staging sites, each hosting multiple breeding populations of shorebirds (Taylor et al. 2010a). As such, birds staging along this coastline may be more vulnerable to potential spills of oil or other toxic chemicals if those spills occur during the post-breeding period when large numbers of shorebirds from multiple populations occur in the same area."

Several sites within the NPR-A have been recognized by the National Audubon Society and Birdlife International program as Important Bird Areas for shorebirds (see Map 3.3.5-4), including Kasegaluk Lagoon, Teshekpuk Lake, east Dease Inlet, Peard Bay, Elson Lagoon, and the Colville River delta.

COMMUNICATION NUMBER 22
Eric Myers, Policy Director
Audubon Alaska, Ocean Conservancy, Pew Environment Group

June 7, 2012

Bud Cribley, State Director
Alaska State Office
Bureau of Land Management
222 West Seventh Avenue – Mailstop 13
Anchorage, Alaska 99513

SUBJ: NPR-A Integrated Activity Plan
Draft Environmental Impact Statement

Dear Director Cribley:
The purpose of this letter is to provide public comment in reference to the Federal Register Notice of March 30, 2012 regarding preparation of a new Integrated Activity Plan Draft Environmental Impact Statement (IAP/DEIS) for the National Petroleum Reserve-Alaska (NPR-A or reserve). This letter is submitted on behalf of Audubon Alaska, Pew Environment Group, and Ocean Conservancy. Our organizations appreciate that the Bureau of Land Management (BLM) is undertaking this first-ever comprehensive planning effort for the entire NPR-A.

At more than 22.5 million acres, the NPR-A is the largest public land management unit in the United States, accounting for approximately one-third of the entire North Slope. The extraordinary ecological, subsistence, scenic, and recreational values of the NPR-A have long been recognized by Congress, which enacted specific legislation to guide management of this area. The area includes the calving grounds for two of Alaska's largest caribou herds; supports a great diversity of predators including grizzly bears, wolves, arctic fox, and wolverine; is relied upon by millions of migratory birds including especially large concentrations of waterfowl; hosts internationally recognized densities of nesting raptors; and sustains various marine mammals including polar bear, beluga whale, walrus, and spotted seal. More than forty Alaska Native communities in northern and western Alaska depend upon the Reserve for irreplaceable opportunities to harvest subsistence resources.

As reflected in the following comments, Alternative B stands apart as the clear choice for the preferred alternative that will allow the Department of the Interior to meet the dual mandate under the Naval Petroleum Reserves Production Act (NPRPA) to effectively and reliably protect the area's regionally, nationally, and globally significant ecological and subsistence resources while allowing continued leasing and energy development in the NPR-A.

Sincerely,
Eric F. Myers
Policy Director
Audubon Alaska

Andrew Hartsig
Director, Arctic Program
Ocean Conservancy

Ken Rait
Director, Western Lands Initiative
Pew Environment Group

INTRODUCTION

When Congress enacted the Naval Petroleum Reserves Production Act (NPRPA) in 1976, management responsibility for the reserve was transferred from the U.S. Navy to the Department of the Interior (DOI) and a new statutory mandate was created requiring the

Secretary to protect significant surface values. This unique statutory framework takes special cognizance of the area's exceptional surface values that include resources of regional, national and global significance. Teshekpuk Lake and the Utukok River areas were specifically identified by Congress as places that should be given "maximum protection" under the law [1]. NPRPA further authorizes the Secretary to identify and protect other lands with significant surface values.

- Congressional intent, as reflected in the provisions of NPRPA, clearly calls for balance in the management of the NPR-A, directing the Secretary to determine where it is appropriate to lease lands in the NPR-A for oil and gas development while also requiring "maximum protection" for areas identified by the Secretary as having "significant subsistence, recreational, fish and wildlife, or historical or scenic value." 42 USC § 6504.

- While requiring the Secretary to undertake an "expeditious program of oil and gas leasing," NPRPA provides that the Secretary "shall include or provide for such conditions, restrictions, and prohibitions as the Secretary deems necessary or appropriate to mitigate reasonably foreseeable and significantly adverse effects on the surface resources" of the NPR-A. 42 USC § 6506a.

- Federal regulations provide that significant values "may be protected by limiting, restricting or prohibiting the use of and access to appropriate lands" in the NPR-A. 43 CFR § 2361.1.[2]

- In 1980, Congress further emphasized the importance of safeguarding the ecological integrity of the NPR-A, calling on the Secretary of the Interior to "take every precaution to avoid unnecessary surface damage and to minimize ecological disturbance throughout the reserve" (H. Rep. 94-192, 94th Cong., 2d Sess., at 21).

[22.001] Under NPRPA, Congress clearly established that while energy development was an important reason for initial establishment of the reserve in 1923, it is now a purpose that must be balanced with "conditions, restrictions, and prohibitions" to ensure protection of the NPR-A's extraordinary ecological values and subsistence resources.

The mandate for balanced management of the NPR-A to ensure protection of special areas and surface resources was stated in the very first Integrated Activity Plan (IAP) adopted for the NPR-A in 1998. The fundamental purpose of an Integrated Activity Plan "is to determine the appropriate multiple use management" of the Reserve; NPRPA "encourages oil and gas development in NPR-A while requiring protection of important surface values."[3]. The NPRPA's statutory directive to provide balanced management of NPR-A lands has been reflected in all previous IAPs adopted for the Northeast and Northwest planning areas that have identified certain lands as not available for leasing with recognition of the importance of preventing oil and gas leasing within critical goose molting areas at Teshekpuk Lake.

On May 17, 2010, DOI issued an Instruction Memorandum for a new "Oil and Gas Leasing Reform" policy regarding on-shore land use planning and lease parcel review that further reinforces the need for balanced management of public lands. The reform policy "recognizes that, in some cases, leasing of oil and gas resources may not be consistent with protection of other important resources and values"[4] and acknowledges the agency's authority to protect surface values by designating lands as unavailable for future leasing and development.

The growing body of research on climate change has special relevance for this NPR-A management plan. While much uncertainty remains, it is evident that climate change will result in substantial landscape-scale impacts to Arctic ecosystems. Along with direct impacts to ecological functions, climate change can be expected to have significant impacts on the abundance and availability of subsistence resources.

> "The impacts of global climate change are more acute in the western Arctic than in most regions of the world, and changes to the environment and habitats of the North Slope resulting from climate change are affecting subsistence resources and subsistence users."[5]

The IAP/DEIS recognizes that "the most serious threats to the viability of subsistence on the North Slope include the effective removal of harvest areas due to industrial development and the impacts of climate change."[6] Threats to subsistence resources, and harvest, from industrial development can take various forms including direct impacts to biological resources through degradation or loss of habitat as well as loss of access to subsistence harvest areas. The IAP/DEIS cites numerous sources documenting the loss of subsistence use areas to oil development on the North Slope as industrialization has spread westward from Prudhoe Bay.[7] The direct as well as long-term impact of new gravel (four season) road construction in the NPR-A is of special concern. As discussed below, there is abundant evidence that roads can have direct and substantial impacts on biological resources at critical life stages – especially calving caribou and molting geese – and that oil field infrastructure generally displaces subsistence use. The creation of new public roads that would introduce increased competitive harvest pressure on subsistence resources is also a special concern that threatens the food security of remote communities.

The certainty of future oil development in the NPR-A, soon to be initiated with construction of the CD-5 Alpine satellite project, combined with direct, indirect and cumulative impacts of climate change, reinforces the need for a new IAP that embraces a conservative and precautionary approach to effectively balance future energy development with reliable provisions to ensure "maximum protection" for significant biological and subsistence resources as required by the NPRPA.

A new NPR-A IAP is also needed in light of recent information documenting dramatically reduced energy development expectations for the NPR-A. Based upon the results of seismic and drilling exploration, the United States Geological Survey (USGS) has greatly revised downward estimated hydrocarbon resources in the NPR-A, which is no longer considered a major new oil province. As documented in the IAP/DEIS, even assuming very high future oil prices, the entire undiscovered economically recoverable oil resource for the NPR-A amounts to less than one month consumption for the United States.

Based on documentation in the IAP/DEIS and as discussed further below, Alternative B is the only alternative presented that can reliably meet the unique statutory requirements of the NPRPA to provide a balance of future energy development opportunities in the NPR-A while also effectively assuring "maximum protection" of significant surface values (i.e., subsistence, recreational, fish/wildlife, historical, and scenic resources) as called for under the law.

DISCUSSION

The following comments focus on the following key issues, which collectively inform selection of the most appropriate management alternative in the IAP/DEIS:

- the NPR-A's exceptional ecological and subsistence resource values;
- climate change implications for significant ecological and subsistence resources;
- the NPR-A's known and estimated recoverable hydrocarbon resources in a national context; and
- comparative analysis of proposed alternatives.

1. Ecological and subsistence resources of regional, national, and global significance

The NPR-A supports an exceptional diversity and abundance of biological resources. The wetland complex of ponds, lakes, rivers, streams, lagoons, and barrier islands of the NPR-A provide nesting, feeding, and staging habitat for migratory bird populations of national and international significance. Marine mammals, including polar bear, walrus, beluga whale, and several species of ice seal, use its shorelines and lagoons. The area provides the concentrated calving grounds, insect relief areas, and migration corridors for the Teshekpuk Caribou Herd (TCH), which is vital for North Slope community subsistence, and the Western Arctic Caribou Herd (WAH), a vital subsistence resource for more than forty communities across western

Alaska. Healthy populations of predators including grizzly bear, wolves, wolverine, and arctic fox are found throughout the region.

As reflected by Congressional recognition of the Teshekpuk and Utukok areas in NPRPA, and the subsequent identification of special areas, [8] the NPR-A supports exceptional migratory bird, caribou, and marine mammal resources and vital subsistence services warranting "maximum protection."

Birds

The largest sedge-wetland complex in the circumpolar Arctic is found within the NPR-A, surrounding Teshekpuk Lake.[9] Approximately 90 bird species including seabirds, loons, waterfowl, shorebirds and passerines occur annually in the NPR-A or in adjacent ocean habitats [10]. Birds that breed, forage, molt, and stage in the NPR-A use all four major North American flyways and disperse to virtually all states throughout the nation. [11] Some birds from the NPR-A travel much further, flying to Central and South America, Russia, China, Japan, Africa, Australia, New Zealand, and even Antarctica.

The NPR-A includes seven designated Important Bird Areas (IBAs) for various waterfowl, loons, shorebirds, and raptors, two of which are recognized as having global significance. [12] In addition to supporting migratory birds that disperse to destinations throughout the world, the NPR-A's bird resources provide a valuable subsistence resource for residents of the region. The NPR-A provides valuable nesting habitat for multiple bird species on the Audubon's 2010 Alaska WatchList, [13] which identifies birds of conservation concern using factors including population size, population trend, threats, and percentage of the population that is dependent on Alaska habitats. These species include: Red-throated Loon, Yellow-billed Loon, Pacific Brant, Common Eider, King Eider, Spectacled Eider, Steller's Eider, American Golden-Plover, Bar-tailed Godwit, Whimbrel, Dunlin, and Buff-breasted Sandpiper.

At least 20 species of waterfowl (ducks, geese, and swans) breed within the NPR-A. [14] The NPR-A provides vital habitat for numerous waterfowl species that are important to the region's subsistence users as well as valuable to sport hunters across the nation from coast to coast. A map showing the migration routes of several waterfowl species that breed in the NPR-A and overwinter in states across the country is shown in Attachment A.

- Up to 30 percent of the Pacific flyway population of Brant may use the Teshekpuk Lake area for breeding and molting. Brant congregate at the Teshekpuk Lake area to molt and fatten for migration, arriving from other areas of the North Slope, the Yukon-Kuskokwim Delta, the western Canadian Arctic, and Siberia. "The origin of this molt-migrant population from such distant nesting areas emphasizes the international importance of the Teshekpuk Lake area to molting brant as well as other goose species." [15] Brant are valued by subsistence hunters in northern and western Alaska as well as sport hunters all along the west coast into Mexico. Fall-staging Brant concentrate in Beaufort Sea lagoons, bays, and deltas, and large numbers also stage in Kasegaluk Lagoon on the Chukchi Sea coast. [16]

- The Teshekpuk Lake area supports tens of thousands of Greater White-fronted Geese, a population that has grown substantially in recent times. White-fronted geese from the Arctic coastal plain migrate south to overwinter in large numbers along the coasts of Texas, Louisiana, and Mexico, providing a valuable resource for subsistence users as well as sport hunters. There are several small and one rapidly growing colony of Lesser Snow Geese along the coastline and river deltas of the NPR-A, with the largest concentration in the Ikpikpuk River delta. A growing number of molting Snow Geese have been documented in the vicinity of Teshekpuk Lake, although "it is unknown whether these large numbers of molting snow geese are associated with local breeding colonies or failed breeders, or if nonbreeding snow geese migrate into Teshekpuk Lake from colonies farther afield (as demonstrated for brant)." [17]

- The NPR-A supports all four species of eider, two of which are recognized as threatened under the Endangered Species Act (Spectacled and Steller's Eider). At Prudhoe Bay, an 80 percent decline in Spectacled Eider was documented during the period 1981-1991, and the most recent population survey data (2010) indicate a slight negative growth rate. [18] Within the NPR-A, the highest remaining Spectacled Eider breeding concentrations occur northeast of Teshekpuk Lake and in the coastal area between Barrow and Wainwright in the vicinity of Peard Bay. The breeding range of Steller's Eider, which once extended from Wainwright east all the way into Canada, [19] is now far more restricted, concentrated primarily around Barrow, limited to less than one thousand birds and declining. Based on migration counts at Point Barrow, the western Arctic population of King Eiders appears to have declined by nearly half prior to 1996 with a possible increase since then. [20] Within the NPR-A, the largest concentration of King Eiders is immediately south and east of Teshekpuk Lake. Based on migration counts at Point Barrow, the Common Eider population has also declined by approximately half. [21] Although Common Eiders do not breed extensively within the NPR-A "substantial numbers of birds stage in coastal lagoons, including Kasegaluk Lagoon in the Chukchi Sea." [22]

- Three species of loon nest in the NPR-A, including a significant portion of the world's Yellow-billed Loon, a candidate species under the Endangered Species Act. [23] It is estimated that approximately one-fifth (3,300) of the worldwide population (16,000) of Yellow-billed Loons breed on the tundra of western and northern Alaska with a substantial portion of those birds (1,223) found on the Arctic coastal plain. [24] The largest, contiguous and high-concentration nesting area for Yellow-billed Loons in the NPR-A is located between the Meade and Ikpikpuk Rivers south of Dease Inlet. The overall Alaska population for Red-throated Loons has experienced a long-term decline of approximately half since the 1970s. [25] Red-throated Loons occur in especially high densities within the vicinity of Peard Bay and Kasegaluk Lagoon. Pacific Loon is the most abundant loon species in the NPR-A. The most recent population estimate for Pacific Loon is the lowest value on record although overall population trends appear stable. [26]

- Northern Pintail is the most abundant duck species found in the NPR-A with population numbers that can fluctuate substantially from year to year (i.e., a difference of up to 62 percent between "high" and "low" population years). The population variability is believed to be in part a result of "northward displacement from southern nesting areas during drought years." [27] The significance of NPR-A lands as a breeding refugium for Northern Pintails in drier/low-water years is unclear. The highest-density breeding areas for Northern Pintail are north and east of Teshekpuk Lake and in the vicinity of Dease Inlet and Nelson Lagoon. Long-tailed Duck is the second-most abundant duck breeding in the planning area. During molt, especially high concentrations of Long-tailed Duck occur in Beaufort Sea lagoons to the east of the NPR-A and then, following molt, substantial numbers concentrate to stage at Kasegaluk Lagoon prior to the fall migration.

-As many as 6 million shorebirds breed in the NPR-A, [28] with 600,000 in the Teshekpuk Lake area alone. [29] More than two dozen species of shorebird breed in the NPR-A. [30] The Teshekpuk Lake area supports significant percentages of populations of three species of shorebird: Dunlin (Calidris alpina arcticola subspecies.) 19%; Black-bellied Plover 10%; and Semipalmated Sandpiper (western population) 10%. [31]

- Overall nest density of breeding birds in the Teshekpuk Lake area is significantly higher than at other sites on the Arctic Alaskan Coastal Plain, [32] and breeding densities of shorebirds are the highest in the circumpolar Arctic. [33]

- The Alaska Shorebird Group [34] has identified several sites within the NPR-A as candidates for inclusion in the Western Hemisphere Shorebird Reserve Network (WHSRN), including: [35]

• The "Teshekpuk Lake-Dease Inlet" area as a candidate WHSRN site of possible international significance. The area is significant for Pectoral Sandpiper, Black-bellied Plover, American Golden-Plover, Long-billed Dowitcher, Dunlin, and Semipalmated Sandpiper.

• Smaller scale sites within the Teshekpuk Lake-Dease Inlet area include:

- "Ikpikpuk River," important for American Golden-Plover, Black-bellied Plover, Bar-tailed
Godwit, Semi-palmated Sandpiper, Dunlin, and Red Phalarope;
- "Ikpikpuk River Delta," important for Black-bellied Plover, Ruddy Turnstone, Semipalmated
Sandpiper, Pectoral Sandpiper, Dunlin, and Red Phalarope; and
- "Kogru River Delta," important for Pectoral Sandpiper, Dunlin, and Red Phalarope.

• The "Barrow and Admiralty Bay" area is another possible WHSRN site of International
significance, important for Semipalmated Sandpiper, Pectoral Sandpiper, Dunlin, Long-billed
Dowitcher, and Red Phalarope.

- Waterfowl and loons on the 2010 Alaska WatchList that nest in the Teshekpuk Lake area include Yellow-Billed Loon, Red-Throated Loon, King Eider, Spectacled Eider, Steller's Eider [36] and Pacific Brant. Maps showing the highest-value breeding and molting areas in the Teshekpuk Lake area for various waterfowl and loon species are provided in Attachment B (breeding birds), Attachment C (molting birds), and Attachment D (WatchList species).

- The NPR-A hosts an extraordinary concentration of nesting raptors – especially Peregrine Falcon, Gyrfalcon, and Rough-legged Hawk – with high densities nesting on the cliffs and river bluffs of the Colville River (including the Kikiakrorak and Kogosukruk tributaries), and upper Ikpikpuk Rivers.

Teshekpuk Lake must be prioritized in the final IAP as an area that Congress specifically identified as deserving of "maximum protection" under the NPRPA. The wetlands area completely surrounding Teshekpuk Lake and extending to the eastern shore of Dease Inlet has been identified as an Important Bird Area of global significance. [37] Secretary Salazar recently highlighted this "unique, ecologically important area [as] the home of the Northern Hemisphere's largest concentration of nesting migratory birds" and noted the importance of protecting the "unique avian and terrestrial resources in the greater Teshekpuk Lake area, including 45 species of birds that rely on one of the most ecologically important wetlands in the entire Arctic...." [38] For more than 40 years, the area north and east of Teshekpuk Lake has been noted for its importance to waterfowl and, especially, molting geese. [39] In recognition of theexceptional values in the Teshekpuk Lake area, all prior IAPs for the Teshekpuk Lake area under NPRPA have included provisions to preclude leasing on tracts identified as important for goose molting.

Up to 100,000 Pacific Brant, Canada Geese, Snow Geese, and White-fronted Geese molt their flight feathers in the vicinity of Teshekpuk Lake each summer. [40] This area is unique and there are no other known areas that support large numbers of four species of molting geese across the circumpolar Arctic.41 Recent surveys have documented significant numbers of additional molting geese north and west of Teshekpuk Lake outside of the "core" molting area, including an additional 23,200 geese (adult and young) with roughly half identified as Pacific Brant (12,100). In particular, Cape Simpson (on the northeastern shore of Dease Inlet) and the Piasuk River Delta (southwestern shore of Smith Bay) were found to host significant numbers of Pacific Brant accounting for the vast majority (88 percent) of the "incremental" Pacific Brant documented outside of the core molting area.42

As observed in the 2010 survey report, the greater Teshekpuk Lake area may, in fact, be even more important for molting Brant than generally recognized because some birds use this area only once in their lifetime, others occasionally, and still others many times. "Therefore, the number or proportion of the population of brant that use this area in a specific year or averaged over multiple years is probably a biased indicator (biased low) of the use of this area by the Pacific flyway population." [43]

Survey data over the past two decades also document marked trends in goose populations in the Teshekpuk Lake area with uncertain long-term implications. The total goose population has grown significantly over time with changes both in abundance as well as spatial distribution. The total number of molting geese ranged from 18,525 to 90,191 between 1976 and 2005. [44] Overall, the total population of geese using the "core" molting area north of Teshekpuk Lake has more than quadrupled. While Pacific Brant and Canada Goose populations have remained relatively stable, the Greater White-fronted Goose population has increased sevenfold. The Lesser Snow Goose population, while relatively small, has also increased rapidly. Research into these dynamics has identified the possibility of interspecies competition among geese. The growing White-fronted Goose population may be excluding Pacific Brant from preferred habitats. Pacific Brant have been shifting in their historic distribution from large, inland lakes to coastal salt marshes. It has been observed that Pacific Brant are moving out of the very same areas where White-fronted Geese are showing substantial increases. [45] Whether the Pacific Brant redistribution is attributable to competition from White-fronted Geese or, possibly, to climate change-driven coastline erosion that has altered the composition of vegetative forage species is a subject of ongoing investigation.

The remote, deep-water lakes in the Teshekpuk Lake area enable flightless geese to escape predators while providing sedges and grasses as high-quality forage. [46] The sensitivity of geese during their flightless, energy-demanding molt is well established. [47] Molting geese will run at the sight of a distant person, and disturbance by aircraft, to which Brant do not habituate, is a major concern. [48,49,50] Responses to aircraft include interruption of foraging behavior, displacement, and flight. Research has documented that 75 percent of Brant flocks showed a change in activity (response) due to over-flights with responses to aircraft up to 4,000 feet in altitude and a lateral distance of up to 3 miles. [51] Behavioral responses to disturbance add stress to the already-taxing physiological requirements of molting geese.[52] Reductions in feeding time or excessive energy expenditures may compromise fitness, survival or reproductive success. [53,54]

While it is not possible to project an exact number of flights required for prospective oil and gas developments, information in the IAP/DEIS provides some insight into the potential scale of development-related air traffic. Based on analysis of activity associated with projected development of Alpine satellite fields, the BLM estimated: up to 2,500 "non-operational" summer helicopter flights annually; during a six-year construction phase, up to 340 one-way "operational" flights per month in the summer (some months as high as 615 flights); during the drilling phase, approximately 70-90 one-way operational flights per month summer and winter; and during satellite field operations, up to 80 flights per month in the summer. [55]

A rapidly growing population of geese that has historically been concentrated within the deferral area north and east of Teshekpuk Lake also raises the question of whether the recognized "core" molting area identified for deferral in 1998 is sufficiently large to support the growing goose population. Coastal erosion which continues to reduce the size of the molting area adds to this concern. [56] Recent surveys documenting significant numbers of Pacific Brant further west of Teshekpuk Lake toward Dease Inlet (i.e., Cape Simpson, Piasuk River Delta), supports the need for a precautionary approach to land management of the greater Teshekpuk Lake-Dease Inlet area to assure long-term goose productivity. (See Volume 5, Map 3.3.5-10: Black Brant Locations Pre-Molt and Molt.)

Caribou

The NPR-A provides essential habitat for two of Alaska's largest caribou herds, the ~ 350,000 animal Western Arctic Caribou Herd (WAH) and the ~60,000 animal Teshekpuk Caribou Herd (TCH). The NPR-A includes the concentrated calving grounds, insect relief areas, and migration corridors for the two herds which, in turn, provide a vital subsistence harvest resource for communities throughout the region. As stated in the IAP/DEIS, caribou "is the most important overall subsistence resource in terms of numbers of animals harvested and consumed, and the greatest frequency of hunting trips taken." [57]

While exact subsistence harvest data are difficult to obtain, it is estimated that up to 14,000 WAH caribou are harvested each year for subsistence and at least 43 rural communities rely upon the herd as their primary terrestrial meat source. [58] Consequently, as stated in the IAP/DEIS, "any activity that threatens the viability of the herd has profound consequences for communities that live within or near its overall range." [59] The TCH, which has a year-round presence on the coastal plain, is an especially critical subsistence resource for several North Slope communities (Barrow, Atqasuk, and Nuiqsut) that are almost exclusively dependent upon this herd. The TCH is unique when compared to the other three herds that calve along the North Slope as "the only herd in which over 50 percent of the population typically overwinters on the coastal plain." [60] The annual subsistence harvest of the TCH has grown substantially over time to as high as 4,800 animals [61] in a single year for an estimated annual harvest of 5-10 percent of the herd. [62] It has been estimated that the TCH provides approximately 95 percent of the caribou harvested by the communities of Barrow and Atqasuk and approximately 85 percent of the caribou harvested by Nuiqsut. [63] The IAP/DEIS recognizes the dependence of Barrow on the TCH noting that 99 percent of the caribou harvested in Barrow during June through September (when 80 percent of the Barrow harvest occurs) comes from the TCH and only 1 percent from the WAH. [64]

The lack of a completed IAP for the South planning area has precluded oil and gas leasing within the WAH habitat areas, providing de facto protection, while Alpine satellite development proposals have focused research attention on impacts to the TCH that would come from future development in the vicinity of Teshekpuk Lake. Fundamental conflicts between caribou and oil and gas development have been documented, particularly impacts on the use of calving areas as well as interference with
migratory movements.

> "Individual and groups of caribou/reindeer: 1) move away from point sources of disturbance; 2) increase activity and energy expenditure near disturbance; 3) delay crossing or fail to cross linear structures; [and] shift away from areas of extensive and intensive development...." [65]

In 2003, the National Research Council (NRC) [66] published a comprehensive report on the cumulative effects of oil and gas development on the North Slope which included consideration of impacts on caribou. The NRC concluded that North Slope development has altered the distribution of female caribou and that the existence of oil industry infrastructure has interfered with caribou movements between coastal insect relief areas and inland feeding areas.

Of special concern are impacts to caribou cows and successful calving due to avoidance of oil facilities and industrial activity. Aerial survey data before and after road placement near Milne Point show that the density of females decreased close to roads. Other observations within the Kuparuk Development Area (KDA) found few females and calves seen from the road system. The NRC cited findings that the proportion of calving caribou "in the densely developed western portion of the KDA declined significantly from 1979 through 1987." [67] The IAP/DEIS acknowledges "seasonal avoidance of habitats within three miles of existing Prudhoe Bay facilities by cows and calves during calving and early post-calving periods." [68]

The NRC reported that from 1980 to 1995 concentrated calving had moved from developed areas to undeveloped areas with lower green-plant biomass than the area previously used; in the eastern portion of the Central Arctic, in the absence of development, no such shift occurred. The

NRC found that from 1988 to 1994, reproductive rates of caribou in regular contact with oil field infrastructure west of the Sagavanirktok River were lower than those of undisturbed female caribou to the east. Further, the reduction in parturition rates for these caribou was exacerbated by intense insect harassment during the period. The NRC concluded that it appears the "effects of oil field development accumulate with the effects of insect harassment by impairing caribou movements between coastal and inland habitats." [69]

The NRC observed that expanded loss of preferred habitat and climate change resulting in increased insect harassment are likely to depress energy and nutrient status and, therefore, summer weight gain of lactating females. The NRC noted possible consequences of these disturbances include reduced nutrient acquisition and retention throughout the calving and midsummer periods, poorer condition in autumn, and a lowered probability of producing a calf the following spring. The NRC concluded that "as a result of conflicts with industrial activity during calving and an interaction of disturbance with the stress of summer insect harassment, reproductive success of Central Arctic Herd (CAH) female caribou in contact with oil development from 1988 through 2001 was lower than for undisturbed females, contributing to an overall reduction in herd productivity." [70]

Research has documented displacement of calving caribou due to infrastructure with the finding that in the KDA, abundance of calving caribou was less than expected within 4 kilometers of roads. [71] The IAP/DEIS recognizes that oil development in the Prudhoe Bay-Kuparuk River Unit area has caused displacement of CAH caribou from a portion of the calving range, with a shift away from the oil fields. [72] Recent information on body weights of CAH cow caribou (and their calves) that calve west of the Sagavanirktok River, compared with CAH cow caribou and calves from calving grounds east of the river, also supports the concern that that disturbance displacement of cow caribou may be compromising CAH productivity. [73]

The IAP/DEIS acknowledges the possibility that the development/disturbance effect may have already been expressed at a population-level as suggested by the higher growth rate of the TCH relative to the CAH. [74] Over the longer term, the IAP/DEIS notes:

> "The reduction in calving habitat use near oil development facilities could eventually limit the growth of Arctic caribou herds within their present ranges and prevent herds from reaching the maximum population size they could achieve without the presence of development." [75]

The need to safeguard the concentrated calving, insect relief, and migration corridors of the TCH under this IAP is heightened by the fact that a substantial portion of the highest-value calving habitat (approximately 17 percent) is already under active lease. Attachment E. With recent approval of the CD- 5 project, new road, pipeline and production infrastructure development is anticipated in the near future.

It has been observed that "caribou were relatively unsuccessful in crossing road/pipeline corridors in the KDA...." [76] Interference with caribou migration movements has also been cited by the Alaska Department of Fish and Game (ADFG). [77] Satellite collar data collected in 2003-2004 season shows that approximately one-third of the TCH moved east from the Teshekpuk Lake area during the fall, heading toward the Arctic National Wildlife Refuge. The first major development they encountered was the Trans-Alaska Pipeline (TAP) and the Dalton Highway "which caused them to divert" north. After several days delay, the herd continued west to the Arctic Refuge. The portion of the herd that wintered in the Arctic Refuge began their westward migration back toward Teshekpuk Lake in mid-April. "[T]he satellite-collared caribou (along with thousands of other TCH animals) reached the TAP/Dalton Highway in different places on 19 April and both were stopped." They remained to the east of the TAP/Dalton Highway corridor, moving north and south, for ten days then finally crossed and moved west. It was also reported that the rest of the TCH caribou that wintered in the Arctic Refuge began migrating back west in mid- May. The satellite data again indicates that the TAP/Dalton Highway interfered with the westward migration movement.

ADFG identified several key implications from these findings, including: [78]

> • the TCH is harvested at a relatively high rate and "if development or other factors reduce productivity, it is more likely to result in a decrease in herd numbers than in herds that are not hunted as heavily;"
>
> • "the TCH has shown great fidelity to its calving area and any activity that displaces caribou from this area could have negative population effects;" and
> • caribou cows "will avoid development and activity, and there has been no way found to mitigate for this impact."

ADFG has drawn special attention to the fact that the TCH relies on narrow migration corridors on either side of Teshekpuk Lake to access insect relief areas and that most parturient TCH cows migrate through the narrow corridor between the east side of the lake and Kogru Inlet: "Development in this area could easily affect the most important segment of the population." [79] The IAP/DEIS reinforces concern about the vulnerability of these particular areas:

> "The most critical corridors for movement to the coastal insect-relief area are through the narrow areas between Teshekpuk Lake and the Kogru River to the east and between the lake and Smith Bay to the northwest. ... Caribou must pass through them to get to and from insect relief areas. The area to the east of Teshekpuk Lake is a particular problem because nearly all of the parturient cows must pass through this area either shortly before or after calving. Any development that occurs on the limited amount of habitat that is used by caribou migrating through this corridor would likely affect caribou movements." [80]

The IAP/DEIS also acknowledges concerns about impacts to the TCH as a result of displacement and/or other impediments to herd migration:

> "Studies done over the last decade have indicated that the Teshekpuk Caribou Herd caribou show high fidelity to the calving area near Teshekpuk Lake and that caribou that calve in the traditional calving area have much higher calving success than caribou found outside the area... If the Teshekpuk Caribou Herd is partially displaced from its calving area, as the Central Arctic Herd has been, or if caribou are impeded from reaching the calving area, recent surveys indicate that calving success would likely be reduced.... [T]he most recent study of Central Arctic Herd productivity in the oil fields suggests that habitat quality in the calving area in one year may affect calf size at birth in the following year. Calf size at birth, in turn, influences calf size at the end of the first summer, which has consequences for survival through the following winter." [81]

The IAP/DEIS recognizes that, to take advantage of seasonally available forage, caribou must be able to migrate freely among summer and winter ranges. If movements are significantly constrained by development infrastructure, "caribou are more likely to overgraze their habitat, possibly leading to population decline." [82]

In addition to concerns about impacts to caribou productivity as a result of displacement from prime calving habitat and/or impediments to migration, the IAP/DEIS acknowledges that oil development would effectively remove large areas from subsistence use. Subsistence "user avoidance" of developed areas has been well documented. As reported by DOI in 1990: "Perhaps the most obvious effect of oil development in the Nuiqsut area has been that it has effectively removed certain areas from the Nuiqsut land use area." [83] The IAP/DEIS reports that "Nuiqsut subsistence use areas retreated from the east as development moved westward from Prudhoe Bay to Oliktok Point, particularly in the area of the Kuparuk River Unit field.... In 1993, development activity was encroaching on valued traditional use areas and onshore subsistence harvest and uses in industrial areas north and east of Nuiqsut declined to near

zero." [84] Four percent were within 5 miles of developed areas, 17 percent were harvested from 6 to 15 miles and 79 percent were harvested more than 16 miles from development. [85]

Subsistence user avoidance resulting from oil development was also extensively cited as a development impact in comments submitted to the U.S. Army Corps of Engineers during review of the CD-5 project. Based on data from the Kuparuk River Unit, "there is essentially no hunting in a 10-mile swath on either side of linear infrastructure or in a 5 mile radius all around a point structure." [86] These comments further observed that "CD-5 and its road and pipeline would effectively remove, or substantially impair, potentially huge swaths of land from the available subsistence range, probably on the order of hundreds of square miles.... Between CD-5 and the next three projects, two of which have substantially longer roads and pipelines than CD-5, the affected acreage is dramatically large." [87] These prospective subsistence avoidance impacts are illustrated based development of the CD-5, CD-6, and CD-7 projects from the Alpine Satellite Development Plan Final EIS as shown in Attachment F.

The Western Arctic Caribou Working Group (WACH Working Group), which represents subsistence users from throughout northwestern Alaska, has a long-standing position on the need for maximum (i.e., permanent) protection of primary caribou habitats in the NPR-A to safeguard this essential subsistence resource. **[22.002]** As reflected in the scoping comments submitted to BLM for the current IAP/DEIS planning process:

> "The Working Group recommends that BLM provide permanent protection to WAH migration corridors and all seasonal core habitats for both WAH and TCH within the NPR-A. ... No leasing or activities associated with the development of oil and gas or coal bed methane should occur within the primary calving ground, critical insect relief habitat, or migratory corridors within the planning area. These seasonal ranges should be considered exclusion areas." [88]

A map showing the areas recommended by the WACH Working Group as unavailable for leasing and excluded from development (concentrated caribou calving and insect relief areas) is provided in Attachment G.

In scoping comments submitted to BLM, the North Slope Borough endorsed the position of the WACH Working Group. [89] In addition, at least 24 tribes and organizations, representing some 90 villages, have endorsed the WACH Working Group request to not allow further oil and gas leasing within the primary calving grounds, migratory routes, and insect relief areas of the WAH and TCH in the new IAP.

Marine Mammals

The NPR-A coastline and immediately adjacent ocean waters of the Chukchi and Beaufort Seas support a significant abundance and diversity of iconic arctic marine mammal species, several of which are listed under the Endangered Species Act. The Kasegaluk Lagoon Special Area was "designated primarily because of high values for marine mammals." [90] Coastal areas directly under the control of the BLM within the IAP planning area provide important habitat for polar bear (threatened), walrus (candidate species), beluga whale, and spotted seal. In addition, other marine mammal species that rely upon adjacent state and federal ocean waters potentially influenced by management decisions under this IAP include other whales, most notably bowhead whale (threatened), and three additional species of ice seal: bearded seal (proposed threatened), ribbon seal, and ringed seal (proposed threatened). [91] Individually and collectively, these marine mammal species provide vital subsistence resources for the communities of the North Slope.

Polar Bear: The US Fish and Wildlife Service (USFWS) has listed the polar bear as a threatened species under the Endangered Species Act and identified critical habitat all along the coastline of the NPR-A, including barrier islands and spits (including at Dease Inlet/Nelson Lagoon, Peard Bay, and Kasegaluk Lagoon) and terrestrial denning areas along the Beaufort Sea

between the Canadian border and Barrow extending inland 5 miles from the coast. There has been an apparent shift in recent years to more terrestrial denning (relative to dens on pack ice) and numbers of polar bears on land during the summer open water period are likely to increase as sea ice continues to retreat. With a small population and low reproductive rates, "any loss of large numbers of polar bears (and especially adult females) or their prey species would exacerbate their low reproductive potential." [92] See IAP/DEIS Volume 5, Map 3.3.3-8: Polar Bear Critical Habitat & Confirmed Dens.

Walrus: USFWS has identified walrus as a candidate species under the Endangered Species Act. Walrus are now hauling out on land in unprecedented numbers as sea ice is lost to climate warming. Reports indicate 10,000 to 20,000 walrus, mostly female and young, hauled out in the vicinity of Kasegaluk Lagoon in 2010. This massive move to shore was also documented in 2007 and 2009, both years when Arctic sea ice was near record low levels. [93] These large walrus aggregations are especially vulnerable to disturbance that can result in deadly stampedes capable of crushing and killing individual animals. As the summer pack ice retreats, large, shore-based walrus haul-outs are likely to become a regular occurrence along the NPR-A coastline, heightening the need for protected disturbance-free areas. See IAP/DEIS Volume 5, Map 338-7: Pacific Walrus Summer Range, Haulout & Carcass Locations.

Beluga whale: During spring and fall migration, beluga whales travel along the Chukchi and Beaufort coastline of the NPR-A using areas such as Kasegaluk Lagoon and the Kuk Inlet estuary. Beluga whales are a valuable subsistence resource for several communities in the NPR-A. Point Lay and Wainwright have community hunts while Kaktovik, Nuiqsut, and Barrow periodically hunt belugas. [94]

Spotted seal: While all ice seals depend upon sea ice, spotted seals are most strongly associated with coastal habitats and land-based haul-outs. "Unlike other ice-seals, spotted seals often use shore-based haul-outs for summer foraging. Haul-outs appear to be selected for physiography: sand bars, spits, and shoals…." [95] Spotted seal haul-out sites are characterized as "isolated and disturbance-free locations" associated with fish spawning. [96] Documented haul-out areas within the NPR-A include Kasegaluk Lagoon, Peard Bay, Dease Inlet, and Smith Bay. [97]

2. Climate change implications for significant ecological and subsistence resources

While there are many uncertainties as to how climate change impacts will manifest in the Arctic, it is accepted that warming will be accentuated at higher latitudes "where the temperatures increase may be more than double the global average." [98] Measurements of permafrost temperatures distributed across the Arctic coastal plain show that the mean surface temperature is likely to have already warmed 2° to 4° C (4° to 8° F) over the past century. [99] Projections indicate substantial further warming with temperature increases disproportionately greater during the winter. Some of the most consequential anticipated impacts concern changes in precipitation, evapotranspiration, and associated "water budgets" that fundamentally influence ecosystem health and productivity.

Ecosystems, wildlife populations, and subsistence resources negatively impacted by climate change will be further jeopardized by future oil and gas development. Selecting a preferred alternative that provides "maximum protection" of the NPR-A's significant surface resources, as required by NPRPA, must account for climate change–driven threats to ensure significant surface resources are not further harmed by industrial development.

As stated in the USGS's very recent synthesis analysis of climate change and implications for ecosystems:

> "As humans respond to the impacts of climate change, a primary concern is to do no greater harm to already stressed natural systems that are also seeking to adapt to change. The potential for unintended negative impacts of human responses on biodiversity is large..." [100]

BLM has previously recognized:

- "Change in global climate parameters is occurring at a rate and magnitude greater than any trend observed in the last 400 years.... These changes are resulting or are expected to result, in changes to the biological environment, causing shifts, expansion or retraction of home range, changes in behavior and changes in population parameters of plant and animal species." [101]

- "Global warming would negatively affect the Arctic environment, including tundra, sea ice and changes in permafrost depth. Reduction in sea ice as a result of global warming would affect marine mammals (particularly polar bears), fish and birds with related implications for subsistence harvests. Due to loss of habitat or from competition from other species whose ranges shift northward, the population of some Arctic species may be reduced and extinction potentially accelerated.... Early thawing of rivers may impact caribou migrations to calving grounds." [102]

USFWS reports that climate change effects already being "observed in the arctic terrestrial landscapes include rapidly eroding shorelines, melting ground ice, and increased shrub growth at high latitudes" and that the Arctic "will likely experience early and disproportionately large impacts" from climate change. [103] Observed and potential effects include:

- In coastal areas, rapid shoreline erosion is occurring, associated with the retreat of summer sea ice. Rising ocean temperatures, sea level rise, permafrost degradation, increased storm surge, and changes to river discharge and sediment transport will continue to affect habitat availability and quality in the coastal zone.

- The shallow wetlands of the coastal plain are sensitive to changes in the water balance that could lead to drying. Some lakes may enlarge through melting and erosion at their edges while others may drain if surrounding ice wedges degrade, leading to the formation of new drainage networks.

- While annual precipitation is expected to increase by 20-60percent (depending upon location), increases in summer temperatures and the duration of the frost-free period are expected to result in increased evapotranspiration, with drying projected across the North Slope. Near the middle of this century (2035-2044), the landscape may be 10-16 percent drier and near the end of the century the North Slope could be 23-37 percent drier.

- Changes in plant phenology (earlier green-up and senescence) are certain to occur as spring melt comes earlier along with possible changes in the abundance and timing of invertebrate emergence.

- Although tundra fires have historically been rare on the North Slope, fire frequency will likely increase as the climate warms, which in turn could promote shrub growth and more fire-prone landscape as well as reduce or eliminate large areas of lichen.

Increasing Arctic temperatures, loss of sea ice, melting permafrost, increased erosion, altered precipitation/hydrology, vegetation changes, and other climate change-driven dynamics could have severe implications for Arctic-adapted wildlife. The IAP/DEIS identifies a variety of ways in which climate change threatens the NPR-A's migratory birds, caribou, marine mammals and the associated subsistence harvests supported by those resources. Some of the most obvious and reasonably anticipated climate change-driven threats are highlighted below.

- Bird habitats worldwide are threatened by climate change while species "for which breeding is restricted to the Arctic regions may be the most vulnerable to climate change." [104] The wetland habitats provided by the NPR-A are vital to many bird species. "Increased summer temperatures could lead to a conversion of aquatic habitats resulting in a loss of not only habitat quantity but also habitat quality in terms of potential decrease in food resources (invertebrate and plant)." [105] Overgrown tundra would reduce shorebird breeding habitats. Changes in plant phenology due to temperature may increase plant biomass but decrease quality in relation to birds. The

timing of emergence (plant and invertebrate) may change in ways that could have profound impacts on nutritional needs, nesting success, and survival. Erosion of key habitats such as barrier islands and spits could be especially significant for species that nest, forage, and stage in these particular habitats. Sea level rise, increased storm surges, changes to mud flats, encroachment of saline waters, and modification of plant communities in coastal areas could all adversely impact niche habitats important for nesting, foraging, molting, and brood-rearing.

- Climate change could reduce caribou forage habitat quality if deciduous shrubs increase and displace cotton grass (important to calving caribou). A warmer/drier climate will increase the potential for fire and loss of lichen that provides an important winter food resource for caribou. Increased precipitation and winter rain-on-snow/icing events could reduce access to winter caribou forage. Warmer temperatures could increase insect abundance and harassment of caribou and compromise herd productivity as well as accelerate green-up in a way that disrupts the current synchronous nature of caribou calving and peak green-up.

- Climate change has the potential to greatly affect arctic marine mammals with some of the potential impacts including loss of important habitat (e.g., sea ice), introduction of new competitors, and diseases. Some species, including walrus and some ice seals, will be forced to spend more time at shore-based haul-outs with more restricted foraging opportunities, where they will be more vulnerable to disturbance and predation.

3. The NPR-A's limited hydrocarbon potential in a national energy context

Originally designated as a Naval Petroleum Reserve in 1923, at a time when the Navy was transitioning from coal to oil, the western Arctic was long believed to contain large stores of petroleum. As a result of exploration drilling and seismic work since that time, however, this assessment has dramatically changed and the NPR-A is no longer believed to contain large oil reserves.

In satisfaction of the NPRPA requirement to "conduct an expeditious program of competitive leasing of oil and gas" (42 USC § 6506A), the DOI has been offering lease sales in the NPR-A for decades. Since 1982, the BLM has conducted 11 lease sales with a total of 36.7 million acres offered, resulting in 6.1 million acres leased. The current administration has annual lease sale offerings in the NPR-A. Exploration drilling activity, which extends back in time before the area was managed by the BLM, was initiated under a drilling program by the Navy during the mid-1940s and early 1950s. This was followed by a second wave of drilling in the 1970s resulting in 28 exploration wells. Since 2000, the oil industry has completed 29 wells in the federally-managed portion of the NPR-A.

Exploration to date has resulted in limited oil discoveries within the NPR-A. These include estimated economically recoverable oil of 150 million barrels near Umiat and an additional estimated 120 million barrels of economically recoverable oil within the Greater Moose's Tooth and Bear Tooth Units, anticipated to be developed as satellites to the existing Alpine oil field. [106] In 2010, USGS updated its assessment of undiscovered energy resources in the NPR-A. Based on the drilling results and accumulated data available to USGS from various drilling and exploration activities, the USGS has identified an unanticipated and abrupt transition from oil to gas approximately 15-20 miles west of the Alpine oil field along with poor reservoir quality in key formations. As stated by the USGS:

> "Recent activities in NPRA, including extensive 3–D seismic surveys, six Federal lease sales totaling more than $250 million in bonus bids, and completion of more than 30 exploration wells on Federal and Native lands, indicate in key formations more gas than oil and poorer reservoir quality than anticipated." [107]

This has radically reduced energy expectations for the NPR-A. The USGS 2010 estimate of 896 million barrels (mean) in undiscovered technically recoverable reserves for the NPR-A is less than ten percent of the prior estimated quantity of oil. The USGS now estimates that the NPR-A's remaining undiscovered oil accumulations are "small by North Slope standards" [108] and that these "oil deposits are not sufficiently large to drive exploration." [109]

The USGS finding of greatly reduced oil potential for the NPR-A is reinforced by oil industry actions on the North Slope. In the past several years, following exploration activity, the vast majority of lease holdings in the NPR-A have either been relinquished or allowed to expire. Of approximately 6 million acres leased and subject to seismic and/or drilling exploration, less than 1.5 million acres remain under active lease. The USGS has estimated the NPR-A's undiscovered natural gas resource at 53 TCF (mean), or approximately 90 percent of the natural gas volume estimated in the prior 2002 assessment. A superabundance of previously discovered natural gas on the North Slope, the glut of natural gas in lower-cost markets elsewhere, and no realistic prospect for construction of a gas pipeline, however, has rendered this resource uneconomic to develop.

Based on the USGS resource assessment, the BLM evaluated the undiscovered economically recoverable oil resource in the NPR-A (i.e., the resource that can be commercially developed). BLM chose a relatively high price of $180 per barrel of oil for its analysis in the IAP/DEIS. The agency specifically notes that it deliberately selected a high oil price "because it does not want to underestimate the potential development that may occur" [110] in the NPR-A. Based on $180 per barrel, the IAP/DEIS projected discovered and undiscovered economically recoverable oil resources for each of the respective alternatives considered in the IAP/DEIS as indicated in Table 1.

Table 1. Estimated Discovered and Undiscovered Economically Recoverable Oil (millions of barrels)

Alternative	A	B	C	D
Discovered:				
Umiat	150	150	150	150
Moose's Tooth/ Bear Tooth	120	120	120	120
Undiscovered:	453	235	235	491
TOTAL	723	505	707	761

Source: IAP/DEIS, Vol. 2 - Table 4-10 and Table 4-15

Within the context of national energy demand and supplies, the total estimated economically recoverable oil in the NPR-A is not significant.

- Putting the oil potential of the NPR-A into the national energy context, the United States consumes ~20 million barrels (MMBO) of liquid fuels per day or approximately 600 MMBO per month. [111]

- The NPR-A's entire projected undiscovered economically recoverable oil reserves of 491 MMBO [112] (under Alternative D in which 100 percent of NPR-A lands would be made available for leasing), would provide for less than one month of consumption for the United States.

- The difference between the total estimated discovered and undiscovered economically recoverable oil reserves under Alternative D (761 MMBO) and the total estimated discovered and undiscovered economically recoverable oil reserves under Alternative B (505 MMBO), is 256 MMBO, which amounts to less than two weeks of consumption for the United States. [113]

DRAFT ALTERNATIVES IN THE IAP/DEIS

The four alternatives presented in the IAP/EIS vary greatly in addressing the mandate of the NPRPA to provide balanced management of the NPR-A – i.e., providing "maximum protection" for areas with "significant subsistence, recreational, fish and wildlife, or historical or scenic value" while allowing for future energy development. 42 USC § 6504.

The most significant distinction among the alternatives concerns how reliably and effectively an alternative would protect significant surface values, as required by NPRPA, and how the alternatives would influence prospective energy development. The strongest (or "maximum") protection available under the IAP planning process is designation of lands as unavailable for leasing [114] (what the IAP/DEIS describes as a "land allocation" decision "regarding what areas of the planning area would be made available for oil and gas leasing" in the NPR-A). [115]

Only an unqualified designation as unavailable for lease or a leasing deferral for the term specified can effectively and reliably assure "maximum protection" from adverse impacts that would come from future oil and gas leasing and development.

Special Areas, Stipulations, Operating Procedures, and Best Management Practices

The NPR-A presently includes four designated "Special Areas":

- Teshekpuk Lake Special Area because of internationally-significant nesting, staging, and molting habitat for a large number of waterfowl;
- Utukok River Uplands Special Area because of its critical importance to the WAH;
- Colville River Special Area because of the need to protect the Arctic Peregrine Falcon; and
- Kasegaluk Lagoon Special Area primarily because of high values for marine mammals.

As noted by the IAP/DEIS, however, the designation of a Special Area is only a recognition of significant resource values but "does not itself impose specific protections, but instead highlights areas and resources" that are deserving of maximum protection under the law. [116]

While more specific lease stipulations, operating procedures, and/or "best management practices" can also be employed by the BLM as land manager in the effort to mitigate impacts, the effectiveness of these provisions is not always assured. Stipulations, operating procedures, and/or best management practices almost universally include potential exemptions, limitations, and/or qualifications that result in making these protections ambiguous or uncertain.

[22.003] The IAP/DEIS states that a stipulation included in an oil and gas lease "shall be subject to a waiver (permanent exemption to a stipulation on a lease), exception (a one-time exemption to a lease stipulation determined on a case-by-case basis), or modification (a change to a lease stipulation either temporarily or for the life of the lease)" subject to the approval of "the authorized officer" if s/he determines that the factors leading to the stipulation's inclusion in the lease "have changed sufficiently to make the protection provided by the stipulation no longer justified and if the proposed operation would still meet the objective stated for the stipulation." [117] The standard of review for "sufficient change," as well as what measure(s) would be used to determine that an alternative activity, project or operation would "still meet the objective," is ambiguous. The same concerns apply to required operating procedures that are subject to waivers, exceptions, and/or modifications.

"Best management practices" is the term that BLM uses in the IAP/DEIS for conditions, other than land allocations (i.e., designations as unavailable for lease or deferral), under Alternatives B, C, and D in lieu of required operating procedures. According to the IAP/DEIS:

> "[B]est management practices describe the protective measures that the BLM would likely impose on applicants for authorization for use of the public lands

> and provide applicants with notice of some of the land management objectives that BLM will seek to achieve during the permitting process ... best management practices are guidance for future performance-based requirements to obtain BLM authorization...." [118]

Discretionary authority, lack of clarity regarding what will/will not be required to assure protection of significant resource values, and reliance on undefined standards is reflected in many of the stipulations and best management practices presented in the IAP/DEIS. For example, under Alternatives A, C, and D, leasing and development would be permitted within the Teshekpuk Lake core goose molting area. Lease stipulation K-11 provides that a workshop would be convened "to identify the best corridor for pipeline construction in efforts to minimize impacts to wildlife and subsistence resources" (emphasis added), providing an uncertain level of protection for this vital area. By contrast, under Alternative B, leasing would not be available in this area, assuring maximum protection.

Some other examples of potential exceptions, qualifications, ambiguity, and the use of undefined standards is reflected in various stipulations and best management practices excerpted from Table 2-23

> C-1 BMP – Objective: Protect grizzly bear, polar bear, and marine mammal denning and/or birthing locations. "Cross country use of heavy equipment and seismic activity is prohibited within 0.5 mile of occupied bear dens ... unless alternative protective measures are approved by the authorized officer..."
>
> E-2 BMP – Objective: Protect fish-bearing water bodies, water quality, and essential habitats. "Permanent oil and gas facilities, including roads, airstrips and pipelines are prohibited upon or within 500 feet as measured from the ordinary high watermark of fish-bearing waterbodies. Essential pipeline and road crossings will be permitted on a case-by-case basis...."
>
> E-11 BMP – Objective: Protections for birds. "To reduce the possibility of birds colliding with above-ground utility lines (power and communication), such lines shall be buried in access roads or suspended on vertical support members except in rare cases, which are to be few in number and limited in extent... towers should be located, to the extent practicable, on existing pads.... Support wires associated with communications towers radio antennas, and other similar facilities should be avoided to the extent practicable."
>
> F-1 BMP – Objective: Minimize effects of low-flying aircraft on wildlife, subsistence activities, and local communities. "The number of takeoffs and landings to support oil and gas operations with necessary materials and supplies should be limited to the maximum extent possible. During the design of proposed oil and gas facilities, larger landing strips and storage areas should be considered to allow larger aircraft to be employed, resulting in fewer flights to the facility... Use of aircraft ... near known subsistence camps and cabins or during sensitive subsistence hunting periods... should be kept to a minimum.... Aircraft use (including fixed wing and helicopter) by oil and gas lessees in the Goose Molting Area (Maps 2-3 or 2-4) should be minimized from May 20 through August 20...."
>
> G-1 Lease Stipulation – Objective: Ensure long-term reclamation of land to its previous condition and use. "The BLM may grant exceptions to satisfy stated environmental or public purposes."
>
> K-2 Stipulation/BMP – Objective: Minimize the disruption of natural flow patterns and changes to water quality.... "On a case-by-case basis... essential pipeline(s), road crossings, and other permanent facilities may be considered ... where the lessee can demonstrate on a site-specific basis that impacts will be minimal."
>
> K-3b Lease Stipulations/BMP – Major Coastal Waterbodies (Kogru River, Dease Inlet, Admiralty Bay, Elson Lagoon, Peard Bay, Wainwright Inlet/Kuk River, and Kasegaluk Lagoon, and their associated Islands. Objective: Protect fish and wildlife habitat... preserve

> air and water quality, and minimize impacts to subsistence activities and historic travel routes on major coastal bodies. "Exploration activities will not unreasonably conflict with subsistence uses or significantly impact seasonally concentrated fish and wildlife resources.... [there must be] adequate spill response capability to effectively respond during periods of broken ice and/or open water, or the availability of alternative methods to prevent well blowouts during periods when adequate response capability cannot be demonstrated.... permanent facilities within the major coastal waterbodies... shall minimize impacts to subsistence uses... Daily operational activities, including use of support vehicles, watercraft and aircraft traffic... shall be conducted to minimize impacts to subsistence resources..."
>
> K-4a Stipulation/BMP Goose Molting Area – Objective: Minimize disturbance to molting geese and loss of molting habitat in and around lakes in Goose Molting Area. "Oil and gas exploration activities will avoid alteration... of critical goose-feeding habitat types... from June 15 through August 20... major construction activities using heavy equipment... but not drilling from existing production pads... shall be suspended unless approved by the authorized officer... strategies to minimize ground traffic shall be implemented... strategies may include limiting trips, use of convoys, different vehicle types, etc. to the extent practicable... aircraft use... shall be restricted [and] restrictions may include... limiting flights... including perhaps suspension of all aircraft use... by the authorized officer if resulting disturbance is determined to be unacceptable."

Only in two places throughout the various Lease Stipulations/Best Management Practices presented in Table 2-3 [119] can the explicit statement "no waiver, exception, or modification will be allowed" be found (i.e., K-3a and K-4a). Even with this statement, in the case of K-4a (concerning a 1-mile "permanent facility" exclusion area around goose molting lakes), the language expressly: 1) excepts pipelines, and 2) also states that "in field" roads "will be authorized as part of oil and gas field development." No definition is provided for the term "in field" and this qualification opens the door to an undefined extent of possible road building within the goose molting area. [120] The final IAP should categorically state that no oil and gas related exploration or development facilities of any kind will be allowed within the goose molting area and that "no waiver, exception, or modification will be allowed."

The IAP/DEIS acknowledges the inherent weakness of a protection strategy (stipulations, operating procedures, and best management practices) premised upon ongoing and open-ended consultations with local residents and communities to assure effectiveness.

> "The actual effectiveness of protective measures depends heavily on their ongoing implementation, on enforcement, and on the precise location of facilities and infrastructure. Effectiveness is also dependent upon the sharing of local knowledge and on informed input of residents of local communities.... [S]everal measures are designed to ensure that subsistence hunters participate in plan design. However, municipal governments and tribal governments generally have limited funding and few paid staff, and members of these organizations feel overtaxed when asked to provide meaningful input to BLM on proposed or permitted activities. This institutional overload affects subsistence users by placing increased, non-compensated demands on their time, further reducing the time available for subsistence pursuits. Many such NPR-A residents contend that the change from prescriptive lease stipulations that were put in place by the 1998 Northeast IAP/EIS to the performance-based rules put in place by subsequent IAP/EISs forces them to spend more time defending subsistence interests because compliance is now defined in terms of meeting management objectives rather than adhering to absolute standards. The contention that it now takes more time to review and to effectively respond to industry proposals was reiterated during the scoping meetings in 2010." [121]

The IAP/DEIS states that "BLM has found that performance based regulations provide equal protection with greater flexibility and project relevance" but does not document or explain how "greater flexibility" or "project relevance" [122] improve the ability to provide "maximum protection" of significant resources as required by the NPRPA. Moreover, the IAP/DEIS states that the "performance-based approach necessitates greater reliance on on-going monitoring to ensure that regulations are, in fact, achieving the desired level of protection." As agency budget resources are already taxed and declining, greater reliance upon monitoring efforts makes effectiveness of performance-based measures uncertain while it is expressly recognized that the level of protection attained is only "equal" to prescriptive (absolute) standards. The IAP/DEIS states that the BLM "is committed" to directing resources to monitoring and support of the Subsistence Advisory Panel [123] although budgets are beyond the agency's control and the Subsistence Advisory Panel can only effectively represent a small fraction of the potentially adversely impacted residents, communities, and stakeholders.

The inability to rely upon stipulations, operating procedures, and best management practices to provide predictable and effective protection is reinforced by past permitting experience. Notwithstanding a stipulated prohibition on permanent facilities within a three-mile buffer zone established to protect wildlife habitat and subsistence hunting and fishing areas along Fish Creek, BLM subsequently approved construction of an Alpine production drill site with 30 wells, a power plant, eight miles of permanent roads, and pipelines within the buffer. When it granted the oil company's requested exception to the lease stipulation, BLM cited economic and geological limitations of directional drilling for the Alpine satellite development. [124]

The environmental consequences of permanent roads are significant and require a complete direct, indirect, and cumulative impacts analysis. The negative impacts of roads are especially evident on the tundra wetlands of the Arctic slope. Many of these effects are noted throughout the IAP/DEIS, including disruption, blockage and alteration of drainage patterns, alteration of plant communities affected by dust deposition and salinity of gravel fill, the spread of thermal karst, and disruption of migratory pathways, nesting, feeding, and staging. Even the Alpine Project, often promoted as a "roadless" development, will total 7 drill sites, 33 miles of permanent gravel roads, two airstrips, two gravel mines; and 72 miles of pipelines. [125]

[22.004] The IAP/DEIS does not provide clarity regarding the extent of future road impacts, including in the some of the NPR-A's most sensitive habitat at Teshekpuk Lake. The "Teshekpuk Lake Caribou Habitat Area" Lease Stipulation/BMP K-5a Objective is "Minimize disturbance and hindrance of caribou, or alteration of caribou movements through portions [of] the Teshekpuk Lake Caribou Habitat Area that are essential for all season use including calving and rearing, insect-relief and migration." A future study is called for by the lessee to provide information to inform permanent facility design, location, and construction making an understanding of potentially severe impacts, at this point, impossible. Considerable discretionary authority is provided to the "authorized officer" who "may" impose meaningful operational constraints at some point in the future, or may provide for exemptions or waivers according to uncertain standards. Again, only a designation of unavailable for lease reliably and unambiguously provides "maximum protection" for significant surface resources.

In order to clearly address the role and environmental impact of permanent gravel roads, future site-specific impact analysis and NEPA compliance will be required. **[22.005]** The final IAP should expressly acknowledge that construction of necessary onshore infrastructure, primarily pipelines and roads, to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope will require a full EIS. [126]

[22.006] Furthermore, in recognition of the well-documented direct and indirect impacts from road development, as well as to avoid conflicts with subsistence users, the final IAP should explicitly prohibit permanent roads connecting the planning area to the major North Slope facilities or the Dalton Highway. This prohibition was originally adopted in the 1998 Northeast

Record of Decision and should be reinstated given the potentially significant impacts of an east-west transportation corridor on North Slope communities and subsistence resources.

[22.007] The analysis of impacts presented in the IAP/DEIS states that oil and gas facility development would be "roadless" which is defined to mean "not connected to outside oil and gas infrastructure by gravel road" [127] (although it is anticipated that roads could be developed within fields between production and processing facilities). The provision that permanent roads would not connect outside of the NPR-A is a fundamental premise of the IAP/DEIS impact analysis and should be expressly stated as a lease stipulation that is not subject to waiver, exemption, or modification.

Major Provisions of the Four Alternatives

Major provisions of the four alternatives are described below with a focus on how the respective alternatives would balance future leasing/development in the NPR-A with effective and reliable protections against adverse impacts through designation of areas as unavailable for leasing. Also provided is information concerning how the respective alternatives would influence estimated future oil production from the NPR-A. [128]

- Alternative D: This alternative would make the entire NPR-A open to oil and gas leasing. No areas with significant value for wildlife or subsistence would be protected by designation as unavailable for leasing. The current leasing deferral at Teshekpuk Lake would expire in 2018, after which this area would be available for leasing, including critical goose molting areas that have been protected from oil and gas development by prior Republican and Democratic administrations since enactment of NPRPA. The existing deferral area protecting Kasegaluk Lagoon and Peard Bay would also expire in 2014, making these important wildlife and subsistence areas available for leasing and development. Under this alternative, existing de facto protections afforded the Utukok River Uplands area and WAH habitat (i.e., the South planning area), which has been unavailable for oil and gas leasing, would be eliminated. Under Alternative D there is no meaningful attempt to balance future oil and gas development with "maximum protection" of significant surface resources and subsistence services as required under NPRPA. See IAP/DEIS Volume 5, Map 2-4.

Alternative D estimated discovered and undiscovered economically recoverable oil: 761 MMBO.

- Alternative A: This alternative, the "no action" alternative, provides that the current leasing deferral at Teshekpuk Lake would expire in 2018, after which the area would be available for leasing, including critical goose molting areas that have been protected from oil and gas development by prior Republican and Democratic administrations since enactment of NPRPA. Only the Teshekpuk Lake bed proper would remain unavailable for leasing per the current IAP for the Northeast area. The existing deferral area protecting Kasegaluk Lagoon and Peard Bay would also expire in 2014 making these important wildlife and subsistence areas available for leasing and development. Alternative A would maintain in place the existing de facto protection of the Utukok River Uplands area and WAH habitat (i.e., the South planning area), which have been and would remain unavailable for oil and gas leasing in the absence of this IAP. See IAP/DEIS Volume 5, Map 2-1.

Alternative A estimated discovered and undiscovered economically recoverable oil: 723 MMBO.

Alternative C: This alternative provides that the current leasing deferral at Teshekpuk Lake would expire in 2018, after which this area would be available for leasing including critical goose molting areas that have been protected from oil and gas development by prior Republican and Democratic administrations since enactment of NPRPA. Only the Teshekpuk Lake bed proper would remain unavailable for leasing (as

provided by the current IAP for the Northeast area). The existing deferral area in the northwestern NPR-A that encompasses both Kasegaluk Lagoon and Peard Bay would expire (in 2014) and be replaced by more discretely defined designations for Kasegaluk Lagoon and Peard Bay as unavailable for leasing. Under this alternative, existing de facto protections afforded the Utukok River Uplands area and WAH habitat (i.e., the South planning area), which has been unavailable for oil and gas leasing, would be greatly reduced with a large portion of the WAH concentrated calving grounds available for future leasing. A new unavailable-for-leasing designation would be made in the extreme southern part of the NPR-A, primarily to safeguard wilderness recreation. This designation would encompass only a portion of the WAH concentrated calving area and insect-relief areas. The following water bodies would also be designated as unavailable for leasing: Elson Lagoon/Dease Inlet and Wainwright Inlet/Kuk River. See IAP/DEIS Volume 5, Map 2-3

Alternative C estimated discovered and undiscovered economically recoverable oil: 707 MMBO.

Alternative B: This alternative would retain existing protections for migratory bird values in the Teshekpuk Lake area, currently provided by deferral of the critical goose molting area and no-lease designation for the Teshekpuk Lake bed, and expand the unavailable-for-lease designation in this area to encompass the TCH concentrated calving and insect relief areas. This alternative would also retain the existing de facto protections afforded the Utukok River Uplands area and WAH habitat (i.e., the South planning area), which has been and would remain unavailable for oil and gas leasing. The following water bodies would also be designated as unavailable for leasing: Elson Lagoon/Dease Inlet and Wainwright Inlet/Kuk River. See IAP/DEIS Volume 5, Map 2-2

Alternative B estimated discovered and undiscovered economically recoverable oil: 505 MMBO.

CONCLUSION

The final preferred alternative selected under the IAP should be the alternative that is most responsive to the requirement of NPRPA to provide "maximum protection" for areas identified as having "significant subsistence, recreational, fish and wildlife, or historical or scenic value" while still allowing energy development consistent with the national interest.

Alternative B stands apart as the clear choice that will best meet the dual mandate of the NPRPA, appropriately balancing future energy development in the NPR-A with reliably effective protections through designation of significant ecological areas as unavailable for lease.

- Alternative B is the only alternative that reliably protects both of the areas specifically identified by Congress as deserving "maximum protection" when it enacted NPRPA in 1976 (i.e. Teshekpuk Lake and the Utukok River uplands).

- Alternative B is the only alternative that reliably protects critical goose molting areas around Teshekpuk Lake that have been withheld from oil and gas development by prior Republican and Democratic administrations since enactment of NPRPA. By contrast, all other alternatives would allow leasing and development in this extremely sensitive, internationally important area.

- Alternative B is the only alternative that reliably protects the entire designated Teshekpuk Lake-East Dease Inlet IBA with its globally significant waterfowl and shorebird breeding densities.

- Alternative B is the only alternative that reliably protects the concentrated caribou calving, insect relief, and migratory areas of both the WAH and TCH as recommended by the WACH Working Group (representing Alaska Native subsistence users, Alaskan hunters, reindeer herders, hunting guides, transporters, conservationists, biologists, and

natural resource managers) and as supported by tribes and organizations representing some 90 villages across the region.

- Alternative B also provides reliable protections for the great majority of USFWS-designated polar bear denning habitat (approximately 66 percent) in the NPR-A along with a large proportion of the designated barrier islands critical habitat (approximately 58 percent). Attachment H. A significant number of identified walrus and spotted seal haul-out areas and coastal habitats important to beluga whales are also protected.

- Alternative B would protect the greatest amount of land that is important for subsistence [129] and thereby provide "maximum protection" of subsistence values as called for by the NPRPA.

- Alternative B also allows for the great majority of estimated economically recoverable oil within the NPR-A to be accessed and developed. Within the context of national energy policy, the reduction in the amount of oil that could be recovered from the NPR-A under Alternative B, relative to other alternatives, would be negligible (approximately two weeks of oil). [130]

By contrast, all of the other alternatives (Alternatives A, C, and D) fail to provide reliably effective protections for many of the NPR-A's significant biological and subsistence resources, especially in the Teshekpuk Lake area. These other alternatives, in compromising the safeguards provided under Alternative B, would not provide the "maximum protection" called for under NPRPA and have the effect of increasing oil recovery from the NPR-A to a degree that is not significant as a matter of national energy demands or supplies.

[1] IAP/DEIS Vol 1, p. 434-435.
[2] IAP/DEIS Vol 1, p. 333.
[3] 1998 NE NPRA Final IAP/EIS, Volume 1: Introduction - Purpose and Need, p. I-1.
[4] Bureau of Land Management, Instruction Memorandum No. 2010-117 dated May 17, 2010.
[5] IAP/DEIS Vol 1, p. 402.
[6] IAP/DEIA Vol 1, p. 406.
[7] IAP/DEIS Vol 1, p. 400.
[8] Teshekpuk Lake Special Area (initially designated in 1977 with and addition in 1998), Utukok River Uplands Special Area (1977), Colville River Special Area (initially designated in 1977 with an addition in 1998), and Kasegaluk Lagoon Special Area
(2004).
[9] CAVM Team. 2003. Circumpolar Arctic Vegetation Map [Scale 1:7,500,000]. Conservation of Arctic Flora and Fauna (CAFF) Map No. 1. Anchorage, Alaska: U.S. Fish and Wildlife Service. www.geobotany.uaf.edu/cavm.
[10] IAP/DEIS Vol 1, p. 222.
[11] Audubon Alaska. 2011.
http://ak.audubon.org/sites/default/files/documents/banded_in_npra_byspecies_13dec2011.pdf. The Birds of NPRA.
[12] Currently designated IBAs within the NPR-A: Teshekpuk Lake/East Dease Inlet (global), Elson Lagoon, Cooper Island, Peard
Bay, Kasegaluk Lagoon (global), and the Colville River.
[13] http://ak.audubon.org/birds-science-education/alaska-watchlist
[14] IAP/DEIS Vol 1, p. 229.
[15] IAP/DEIS Vol 1, p. 231.
[16] IAP/DEIS Vol 1, p. 230.
[17] IAP/DEIS Vol 1, p. 234.
[18] IAP/DEIS Vol 1, p. 296.
[19] IAP/DEIS Vol 1, p. 300.
[20] IAP/DEIS Vol 1, p. 237.
[21] IAP/DEIS Vol 1, p. 238.
[22] IAP/DEIS Vol 1, p.238.

[23] Earnst et al. 2005. Population size and trend of Yellow-billed Loons in northern Alaska. Condor 107: 289-304.
[24] IAP/DEIS Vol 1, p. 305.
[25] IAP/DEIS Vol 1, p 228.
[26] IAP/DEIS Vol 1, p. 229.
[27] IAP/DEIS Vol 1, 235.
[28] King, R. 1979. Results of aerial survey of migratory birds on NPRA in 1977 and 1978. In Lent, PC technical ed. Studies of
selected wildlife and fish and their use of habitats on and adjacent to NPRA 1978-1979, Volume 1 National Petroleum Reserve –
Alaska, 105© Land Use Study. Anchorage: U.S. Department of the Interior. 187-226.
[29] Andres et al. In Press. Shorebirds breed in unusually high densities in the Teshekpuk Lake Special Area. Accepted by Arctic.
[30] IAP/DEIS Vol 1, p. 239.
[31] Andres, B.A., J.A. Johnson, S.C. Brown, R.B. Lanctot. In Press. Shorebirds breeding in unusually high densities in the Teshekpuk
Lake Special Area, Alaska. Accepted for publication in Arctic April 2012.
[32] Liebezeit et al. 2011 Breeding ecology of birds at Teshekpuk Lake: a key habitat site on the Arctic Coastal Plain of Alaska. Arctic 64 (1): 32-44.
[33] Andres, B.A., J.A. Johnson, S.C. Brown, R.B. Lanctot. In Press. Shorebirds breeding in unusually high densities in the Teshekpuk
Lake Special Area, Alaska. Accepted for publication in Arctic April 2012.
[34] Alaska Shorebird Group. 2008. Alaska Shorebird Conservation Plan – Version II. Alaska Shorebird Group, Anchorage, Alaska
[35] Recognizing that the loss of critical habitat can have hemispheric ramifications, the Western Hemisphere Shorebird Reserve Network was initiated in 1985 to identify key shorebird areas. A number of the areas identified as IBAs include or overlap with areas identified as candidate WHSRN sites.
[36] The USFWS aerial survey data does not specifically identify the Steller's Eider. This species, listed as threatened under the
Endangered Species Act, is known to nest in the area but in such low numbers that detection by aerial survey is not feasible.
[37] National Audubon Society. Important Bird Area Site Description – Teshekpuk Lake-E. Dease Inlet. See
http://iba.audubon.org/iba/viewSiteProfile.do?siteId=2781&navSite=state
[38] Department of the Interior, News Release: Obama Administration Announces Major Steps toward Science-Based Energy
Exploration in the Arctic, February 17, 2012.
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[40] Derksen. et al. United States Geological Survey (USGS) - Alaska Science Center. "Avian Population Response to Ecological Change Along the Arctic Coastal Plain" USGS DOI Landscape Initiative Progress Report (January 2005).
[41] Flint, et al. "Changes in abundance and spatial distribution of geese molting near Teshekpuk Lake, Alaska: interspecific competition or ecological change?" Polar Biology (October 2007)
[42] US Fish and Wildlife Service, Waterfowl Management (Fairbanks). Teshekpuk Lake Area Molting Goose Survey -2010. (March 2010)
[43] US Fish and Wildlife Service, Waterfowl Management (Fairbanks). Teshekpuk Lake Area Molting Goose Survey -2010. (March 2010)
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[50] IAP/DEIS Vol 3, p. 124.
[51] IAP/DEIS Vol 2, p. 159.
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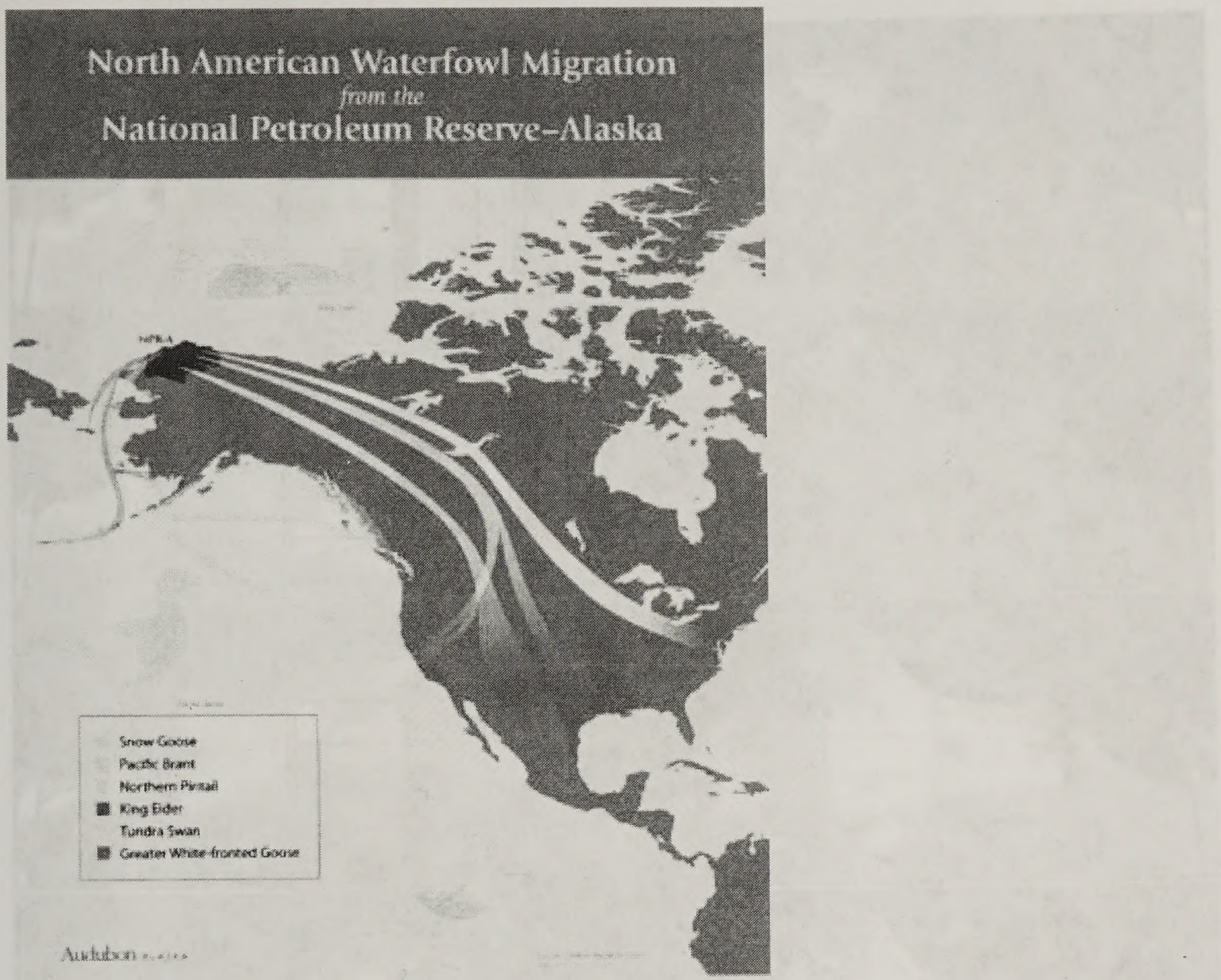
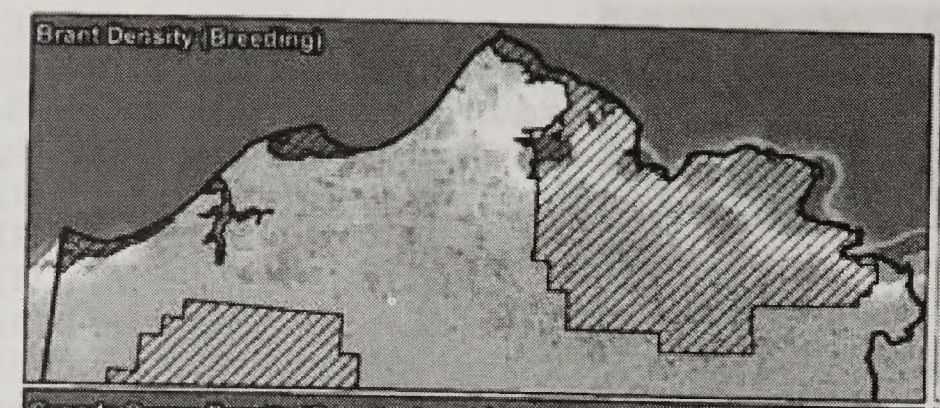
[53] Taylor, E.J. 1993. Molt and bioenergetics of Pacific black brant (Branta bernicla nigricans) on the Arctic Coastal Plain, Alaska. Ph.D. dissertation, Texas A&M University, College Station, Texas.
[54] IAP/DEIS Vol 2, p. 168-169.
[55] IAP/DEIS Vol 2, p. 11.
[56] Mars and Houseknecht, "Quantitative remote sensing study indicates doubling of coastal erosion rate in past 50 yr along a segment of the Arctic coast of Alaska", Geology, v. 35, no. 7 (July 2007)
[57] IAP/DEIS Vol 1, p. 366.
[58] IAP/DEIS Vol 1, p. 399.
[59] IAP/DEIS Vol 1, p. 399.
[60] Person, et al., Distribution and Movement of the Teshekpuk Caribou Herd 1990-2005: Prior to Oil and Gas Development, Arctic Vol 60, No. 3 (September 2007).
[61] IAP/DEIS Vol 1, p. 266.
[62] Person, et al., Distribution and Movement of the Teshekpuk Caribou Herd 1990-2005: Prior to Oil and Gas Development, Arctic Vol 60, No. 3 (September 2007).
[63] Lincoln Parrett, Alaska Department of Fish and Game, 2010, personal communication.
[64] IAP/DEIS Vol 1, p. 266.
[65] Wolfe, et al. 2000: Polar Research 19(1), 63-13.
[66] National Research Council, Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope, National Academies Press (2003)
[67] National Research Council, Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope, National Academies Press (2003) p. 111.
[68] IAP/DEIS Vol 2, p. 185.
[69] National Research Council, Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope, National Academies Press (2003), p. 116.
[70] National Research Council, Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope, National Academies Press (2003), p. 116.
[71] Cameron, et al., "Central Arctic Caribou and Petroleum Development: Distribution, Nutritional, and Reproductive Implications" Arctic Vol. 58, No. 1 (March 2005)
[72] IAP/DEIS Vol 3, p. 144.
[73] IAP/DEIS Vol 3, p. 144.
[74] IAP/DEIS Vol 3, p. 245.
[75] IAP/DEIS Vol 3, p. 144.
[76] Cameron, et al., "Central Arctic Caribou and Petroleum Development: Distribution, Nutritional, and Reproductive Implications" Arctic Vol. 58, No. 1 (March 2005)
[77] Alaska Department of Fish and Game, Caribou Management Report (July 2002-June 2004), Game Management Unit 26A, Herd: Teshekpuk, Geographic Description: Western North Slope.

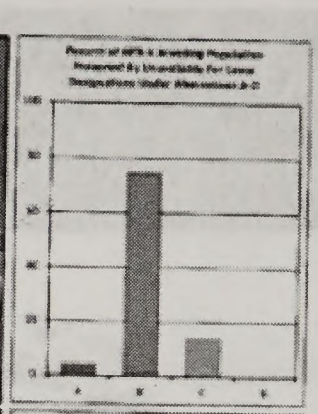
[78] Alaska Department of Fish and Game, Caribou Management Report (July 2002-June 2004), Game Management Unit 26A, Herd: Teshekpuk, Geographic Description: Western North Slope.
[79] Alaska Department of Fish and Game, Caribou Management Report (July 2002-June 2004), Game Management Unit 26A, Herd: Teshekpuk, Geographic Description: Western North Slope.
[80] IAP/DEIS Vol 2, p. 185.
[81] IAP/DEIS Vol 2, p. 186.
[82] IAP/DEIS Vol 1, p. 262.
[83] IAP/DEIS Vol. 1, p. 400.
[84] IAP/DEIS Vol 1, p. 401.
[85] IAP/DEIS Vol 1, p. 401.
[86] Kuukpik Corporation to the U.S. Army Corps of Engineers, letter dated July 21, 2009.
[87] Kuukpik Corporation to the U.S. Army Corps of Engineers, letter dated July 21, 2009.
[88] Western Arctic Caribou Working Group to BLM Alaska State Office, "Caribou Working Group Scoping Comments on NPR-A IAP/EIS," letter dated September 30, 2010.
[89] North Slope Borough to BLM Alaska State Office, "Scoping comments, BLM's updated Integrated Activity Plan and Environmental Impact Statement," letter dated October 1, 2010.
[90] IAP/DEIS Vol 1, p. 334.
[91] IAP/DEIS Vol 1, p. 286. Table 3-20.
[92] IAP/DEIS Vol 1, p. 324.
[93] Anchorage Daily News, "Flipper to flipper: with ice gone, thousands of walrus jam together on land" September 14, 2010.
[94] IAP/DEIS Vol 1, p. 293.
[95] Smith, M.A., Arctic Marine Synthesis: Atlas of the Chukchi and Beaufort Seas, Audubon Alaska (January 2010, First Edition), p. 6-17.
[96] IAP/DEIS Vol 1, p. 287.
[97] Smith, M.A., Arctic Marine Synthesis: Atlas of the Chukchi and Beaufort Seas, Audubon Alaska (January 2010, First Edition), see map of Spotted Seal distribution.
[98] IAP/DEIS Vol 1, p. 121-125.
[99] IAP/DEIS Vol 1, p. 125.
[100] U.S. Geological Survey, 2012. Impacts of Climate Change on Biodiversity, Ecosystems, and Ecosystem Services: Technical Input to the 2013 National Climate Assessment. [Shawn Carter, F. Stuart Chapin III, Nancy Grimm, Peter Kareiva, Mary Ruckelshaus, Michelle Staudinger, Amanda Staudt, Bruce Stein]. U.S. Geological Survey, Reston, VA. Draft dated May 23, 2012.
[101] NE NPRA Final Supplemental IAP/EIS (2008), Chapter IV: Environmental Consequences – Cumulative Effects, Climate Change Overview, p. 4-640.
[102] NE NPRA Final Supplemental IAP/EIS (2008), Chapter III; Affected Environment, Physical Environment, Climate and Meteorology, p. 3-7.
[103] USFWS, Wildlife Response to Environmental Arctic Change: Predicting Future Habitats of Arctic Alaska, WildREACH Workshop Report (November 2008)
[104] IAP/DEIS Vol 1, p. 257.
[105] IAP/DEIS Vol 1, p. 258.
[106] IAP/DEIS Vol 2, p. 51-55.
[107] 2010 Updated Assessment of Undiscovered Oil and Gas Resources of the National Petroleum Reserve in Alaska (NPRA), United States Geological Survey (October 2010)
[108] IAP/DEIS Vol 2, p. 23.
[109] IAP/DEIS Vol 2, p. 46.
[110] Vol. 2, p. 59. The $180/barrel oil price used in the BLM's IAP/DEIS analysis is the highest price considered by the USGS and approximately 50 percent higher than the reference price estimate used by the federal Energy Information Administration.
[111] Energy Information Administration, 2012. Total U.S. consumption of liquid fuels ranges from 19.2 million barrels/day (2010) to a projected 20.1 million barrels/day (2035). http://www.eia.gov/forecasts/aeo/er/early_fuel.cfm
[112] IAP/DEIS Vol 2, p. 63: Table 4-10.
[113] IAP/DEIS Vol 2, p. 63: Table 4-15.

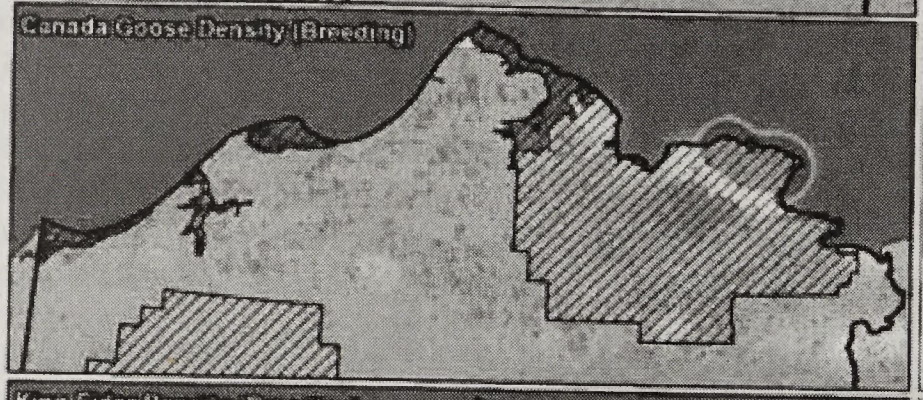
[114] Designation of land as unavailable for leasing under the IAP provides the "maximum protection" for significant surface resources in the NPR-A consistent with the Congressional direction provided in the NPRPA of 1976. This designation would apply for the duration of the plan; only Congress has the authority to make permanent protection designations.
[115] IAP/DEIS Vol 1, p. 28.
[116] IAP/DEIS Vol 1, p. 16.
[117] IAP/DEIS Vol 1, p. 28.
[118] IAP/DEIS Vol 1, p. 29.
[119] Table 2-3. Alternative stipulations and required operating procedures/best management practices. IAP/DEIS Vol 1, p. 36.
[120] IAP/DEIS Vol. 1 p. 81.
[121] IAP/DEIS, Vol 2, p. 290-291.
[122] IAP/DEIS, Vol 2, p. 290-291.
[123] IAP/DEIS, Vol 2, p. 291.
[124] BLM. November 8, 2004. Alpine Satellite Development Plan Record of Decision. Signed by Rebecca W. Watson, Assistant Secretary Land and Minerals Management, p. 17 as cited by The Wilderness Society, Alpine Oil: Nothing to Brag About (February 2005).
[125] BLM. September 2004. Alpine Satellite Development Plan. Final Environmental Impact Statement. Vol. 1, Sec. 2, Tables 2.4.1- 6, 2.4.1-7, 2.4.1-8, pp. 69-71.
[126] IAP/DEIS Vol 1, p. 1. The IAP/DEIS presently states that a purpose of the IAP is to ensure that the BLM's land management will provide the opportunity to construct onshore infrastructure, including pipelines and roads, to bring oil/gas resources from the Chukchi Sea to the Trans-Alaska Pipeline or future gas pipeline subject to appropriate conditions "developed through a NEPA process." See: Authorization to develop such a pipeline and associated infrastructure would be an action that significantly affects the environment within the context of NEPA and thus require a full EIS.
[127] IAP/DEIS, Vol.2, p. 283.
[128] While the IAP/DEIS will make no decision regarding a specific corridor for infrastructure associated with potential offshore development in the Chukchi Sea, it is expressly recognized by BLM that such a corridor could be accommodated under any of the four alternatives. Also, under each of the alternatives it is expressly recognized that future development of valid NPR-A oil and gas leases that may currently exist within the planning area would be accommodated.
[129] IAP/DEIS, Vol 1, p. 116.
[130] The difference between the total estimated economically recoverable oil under Alternative D (761 million barrels including Umiat, Moose's Tooth, and Bear Tooth production) and Alternative B (505 million barrels including Umiat, Moose's Tooth, and Bear Tooth production) is 256 million barrels, the national consumption equivalent of approximately two weeks. Under Alternative B, estimated economically recoverable reserves of 505 million barrels equals 66 percent of the total estimated economically recoverable reserves of 761 million barrels under Alternative D, that would allow leasing throughout the entire NPR-A.

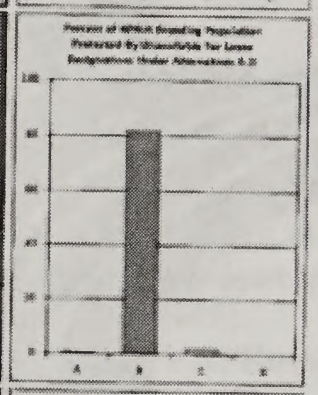


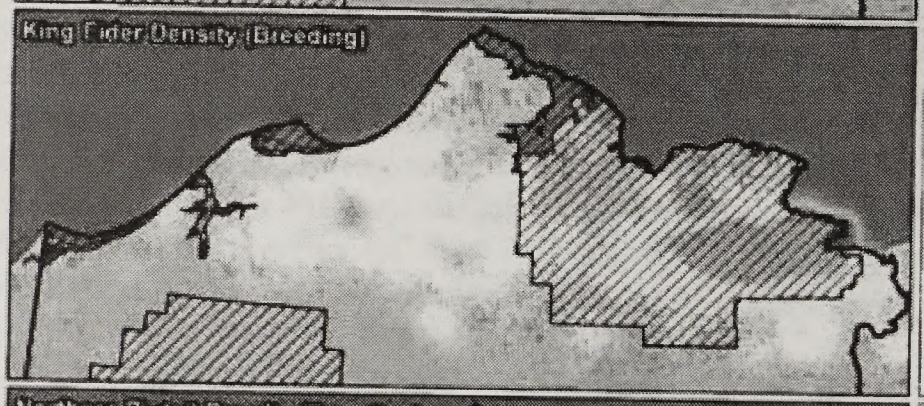
Attachment A

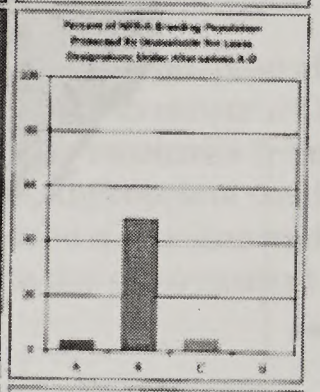

Brant Density (Breeding)

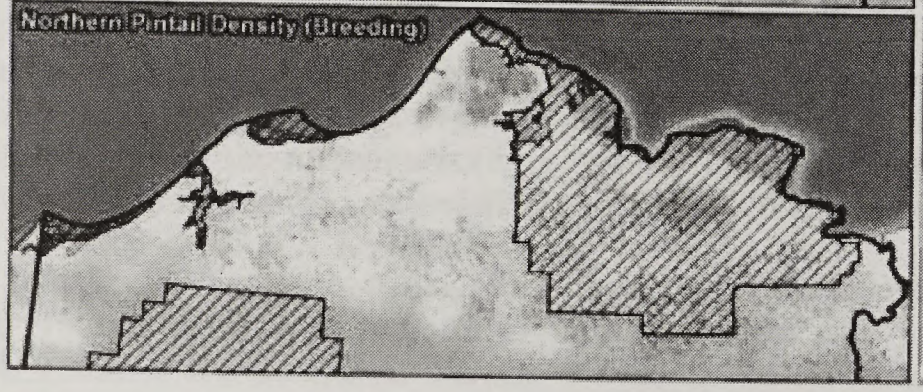


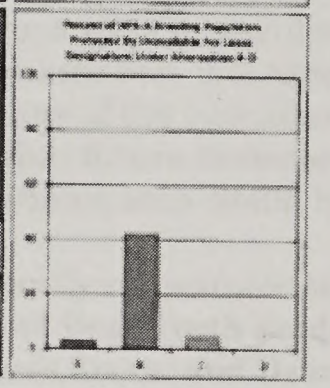

Canada Goose Density (Breeding)

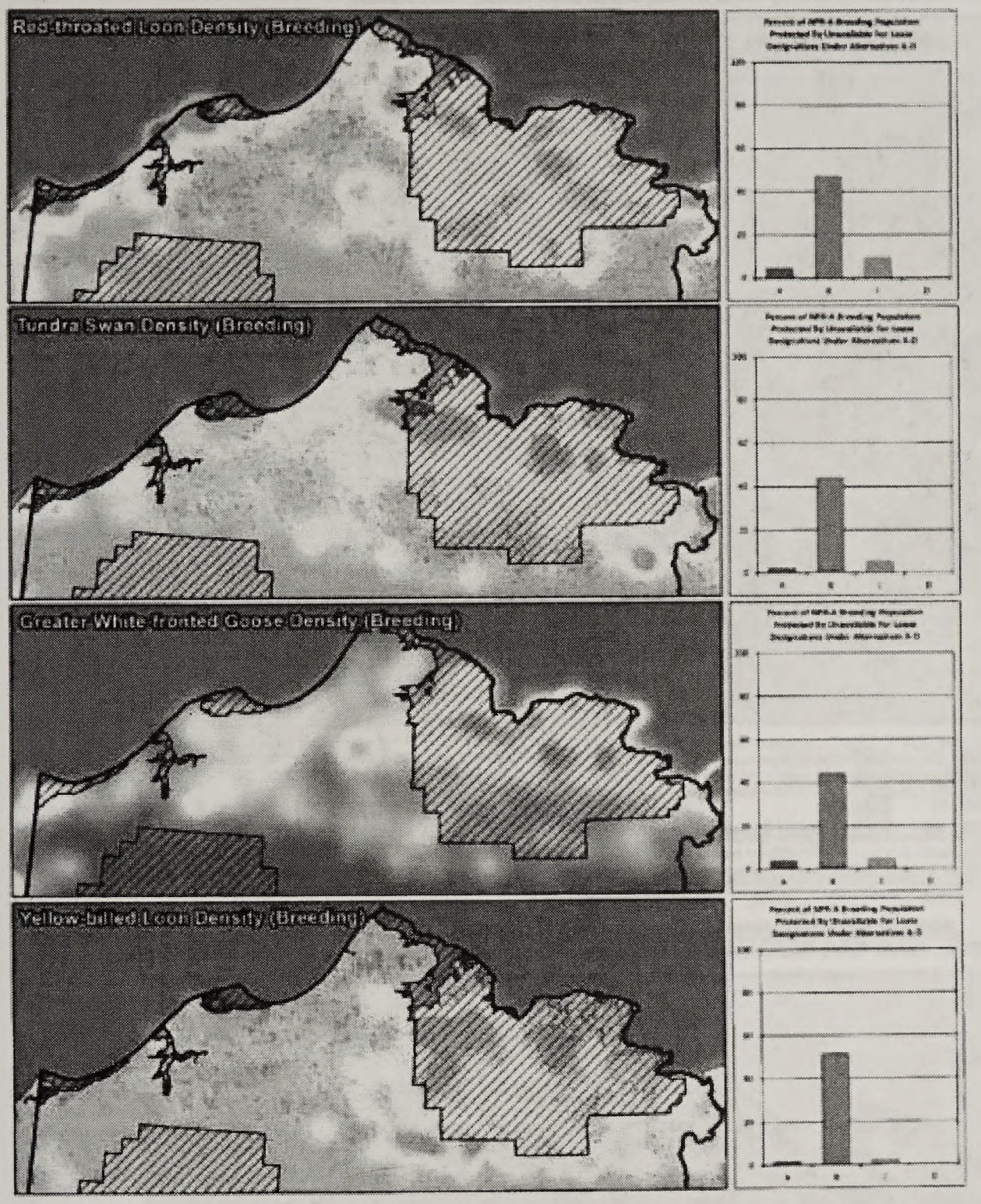



King Eider Density (Breeding)

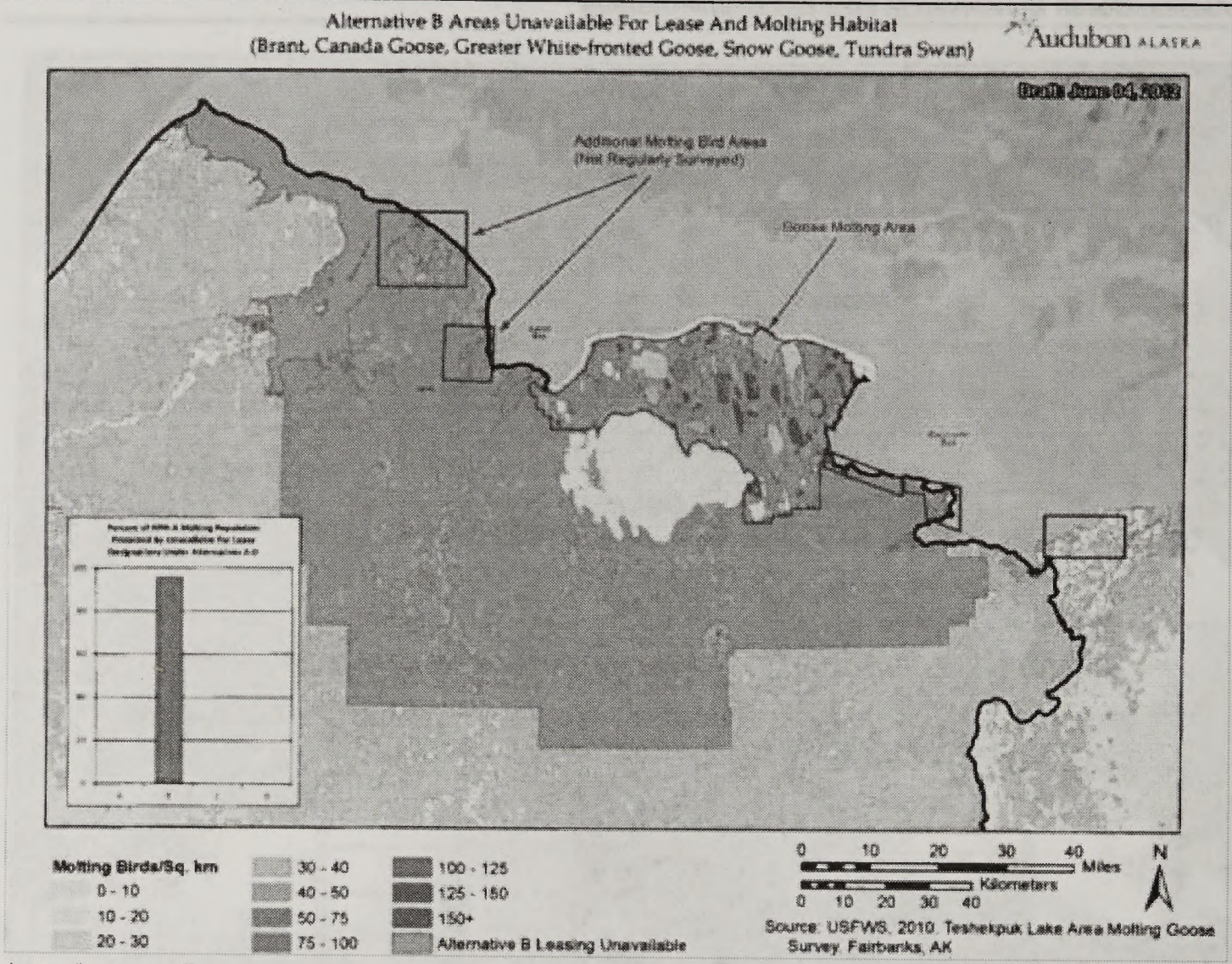



Northern Pintail Density (Breeding)

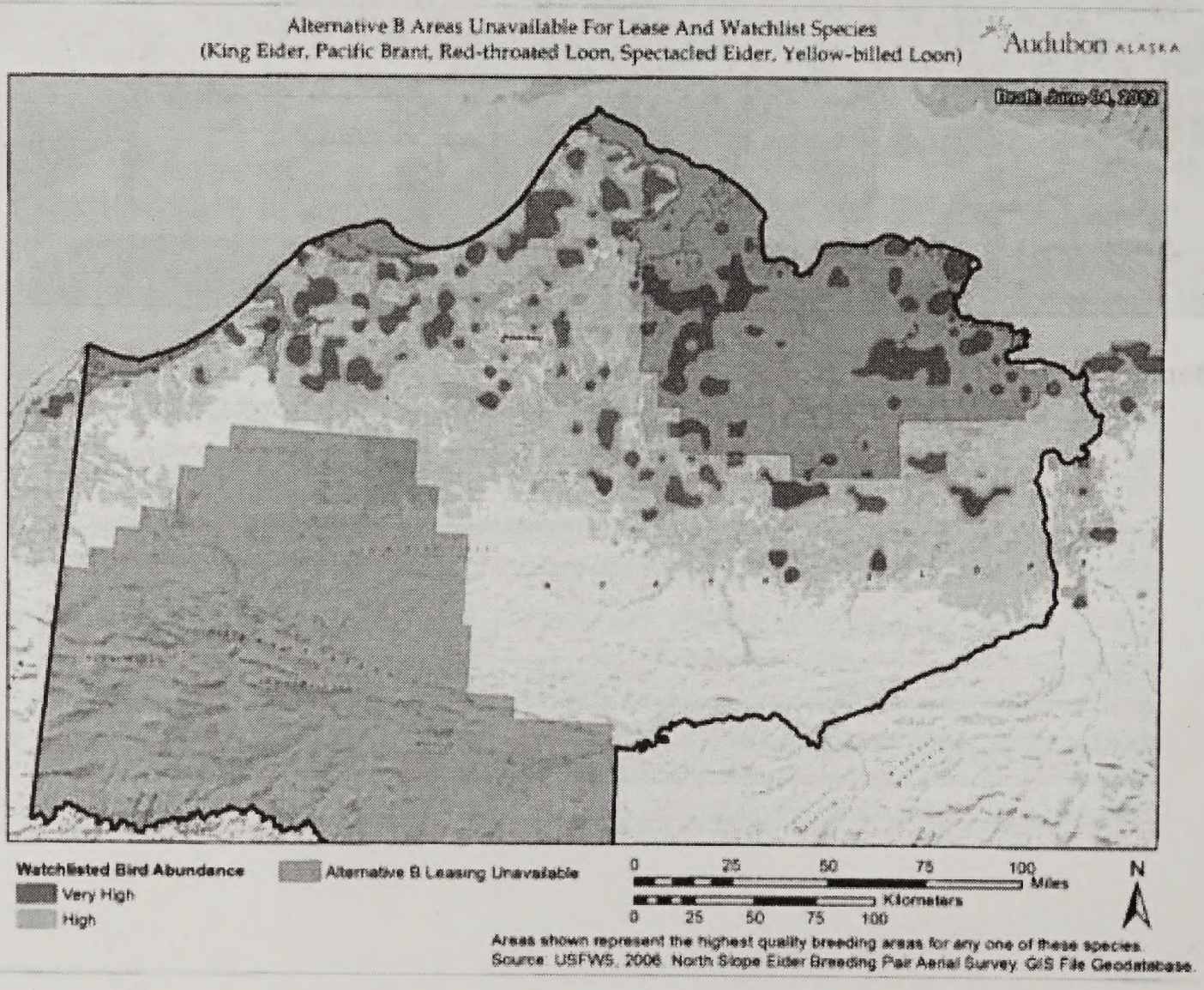



Red-throated Loon Density (Breeding)
Tundra Swan Density (Breeding)
Greater White-fronted Goose Density (Breeding)
Yellow-billed Loon Density (Breeding)

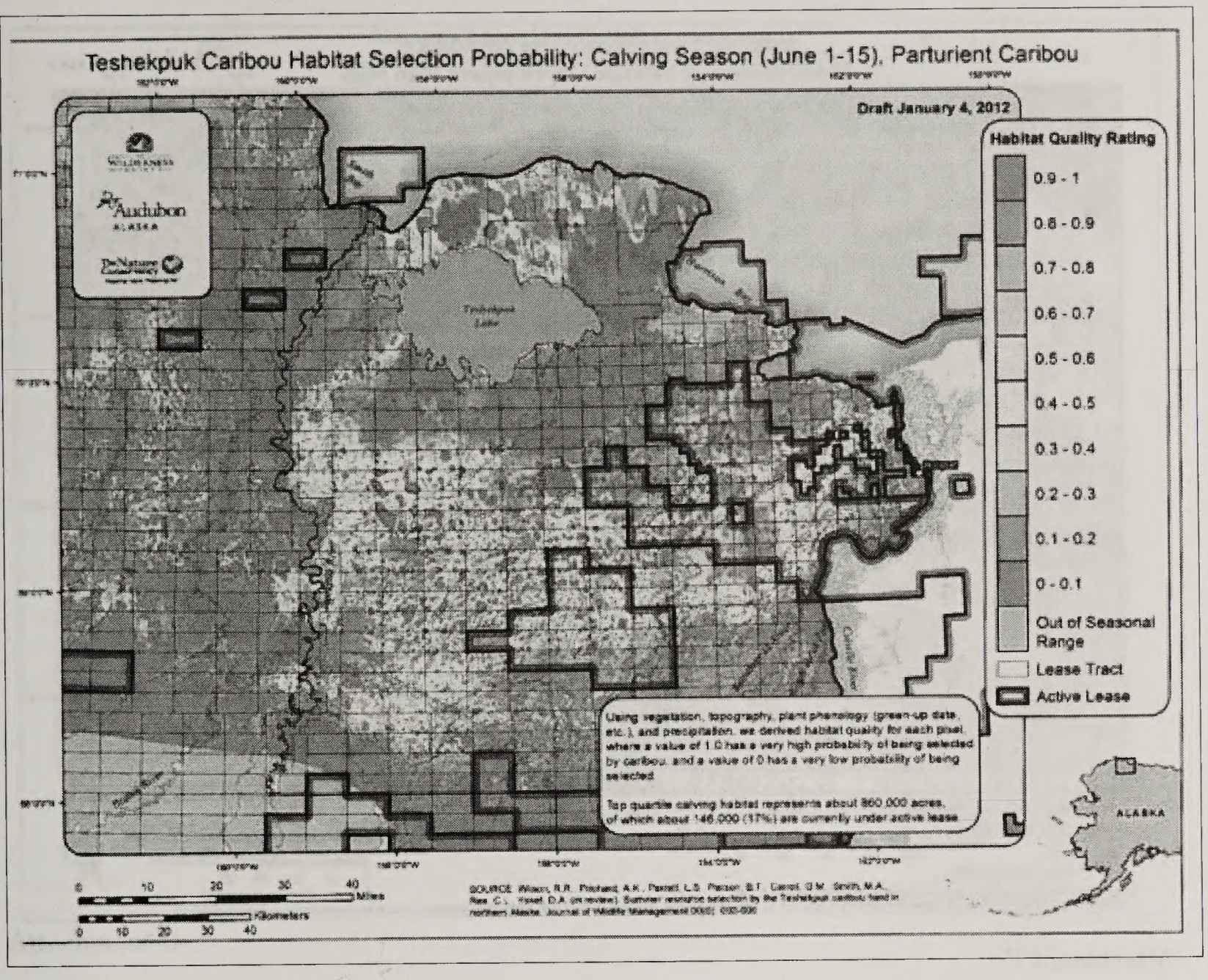
Attachment B


Alternative B Areas Unavailable For Lease And Molting Habitat
(Brant, Canada Goose, Greater White-fronted Goose, Snow Goose, Tundra Swan)
Audubon ALASKA
Additional Molting Bird Areas
(Not Regularly Surveyed)
Molting Birds/Sq. km
0 - 10
10 - 20
20 - 30
30 - 40
40 - 50
50 - 75
75 - 100
100 - 125
125 - 150
150+
Alternative B Leasing Unavailable
0 10 20 30 40 Miles
0 10 20 30 40 Kilometers
N
Source: USFWS, 2010. Teshekpuk Lake Area Molting Goose Survey. Fairbanks, AK

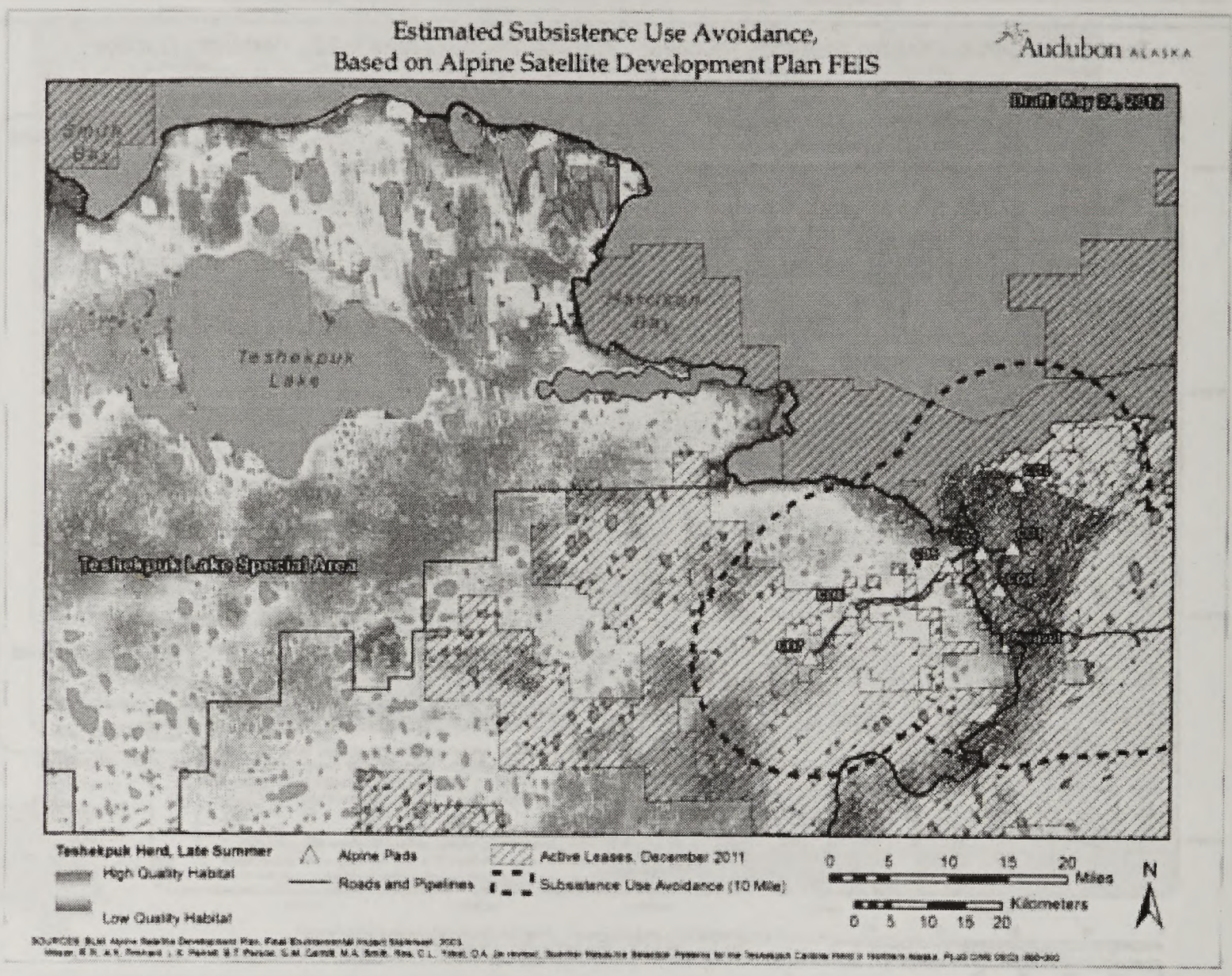
Attachment C


Alternative B Areas Unavailable For Lease And Watchlist Species
(King Eider, Pacific Brant, Red-throated Loon, Spectacled Eider, Yellow-billed Loon)
Audubon ALASKA
Watchlisted Bird Abundance
Very High
High
Alternative B Leasing Unavailable
0 25 50 75 100 Miles
0 25 50 75 100 Kilometers
N
Areas shown represent the highest quality breeding areas for any one of these species.
Source: USFWS, 2006. North Slope Eider Breeding Pair Aerial Survey. GIS File Geodatabase.

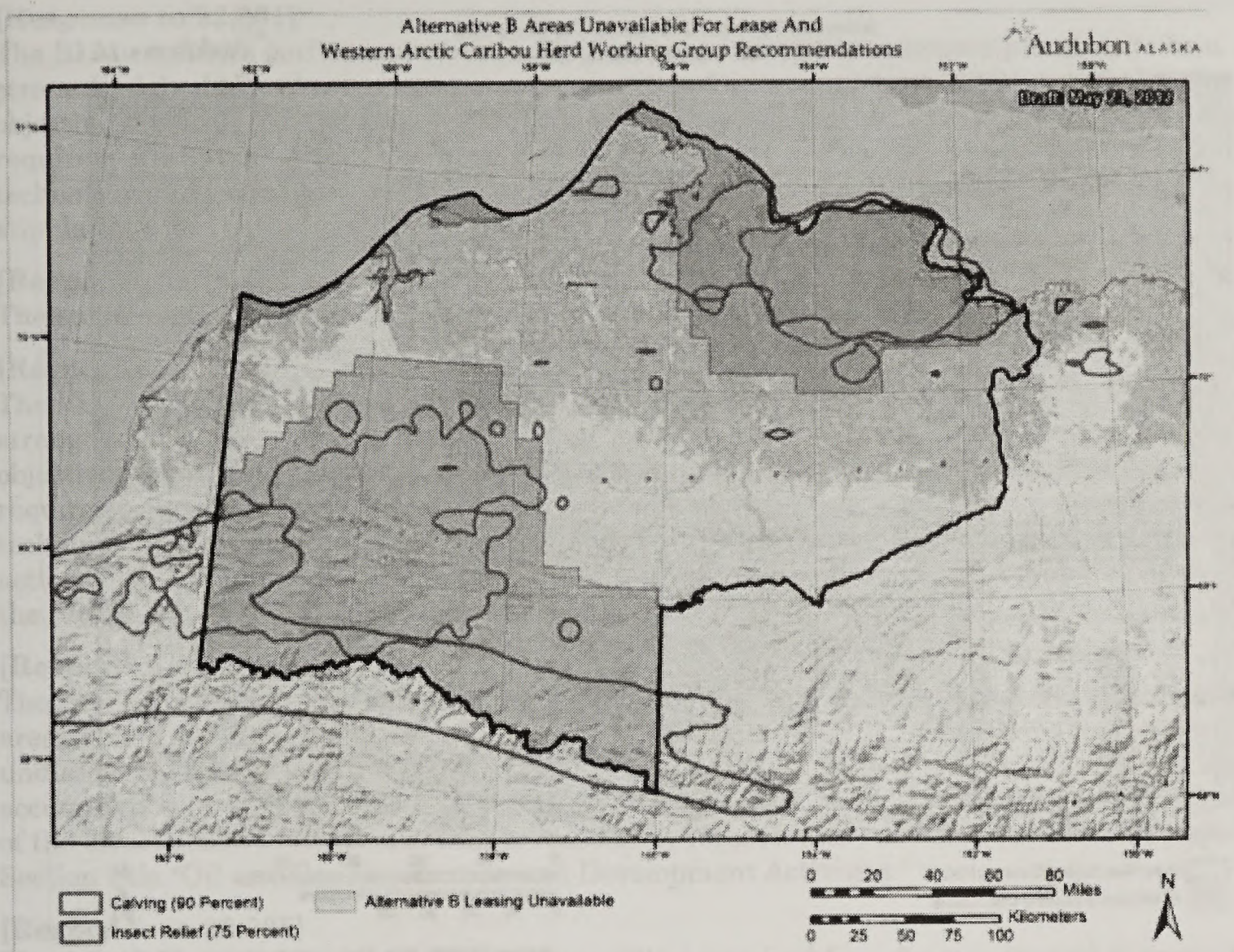
Attachment D


Teshekpuk Caribou Habitat Selection Probability: Calving Season (June 1-15), Parturient Caribou
Draft January 4, 2012
Habitat Quality Rating
0.9 - 1
0.8 - 0.9
0.7 - 0.8
0.6 - 0.7
0.5 - 0.6
0.4 - 0.5
0.3 - 0.4
0.2 - 0.3
0.1 - 0.2
0 - 0.1
Out of Seasonal Range
Lease Tract
Active Lease
Audubon ALASKA
Using vegetation, topography, plant phenology (green-up date, etc.), and precipitation, we derived habitat quality for each pixel, where a value of 1.0 has a very high probability of being selected by caribou, and a value of 0 has a very low probability of being selected.
Top quartile calving habitat represents about 860,000 acres, of which about 146,000 (17%) are currently under active lease.
ALASKA
0 10 20 30 40 Miles
0 10 20 30 40 Kilometers

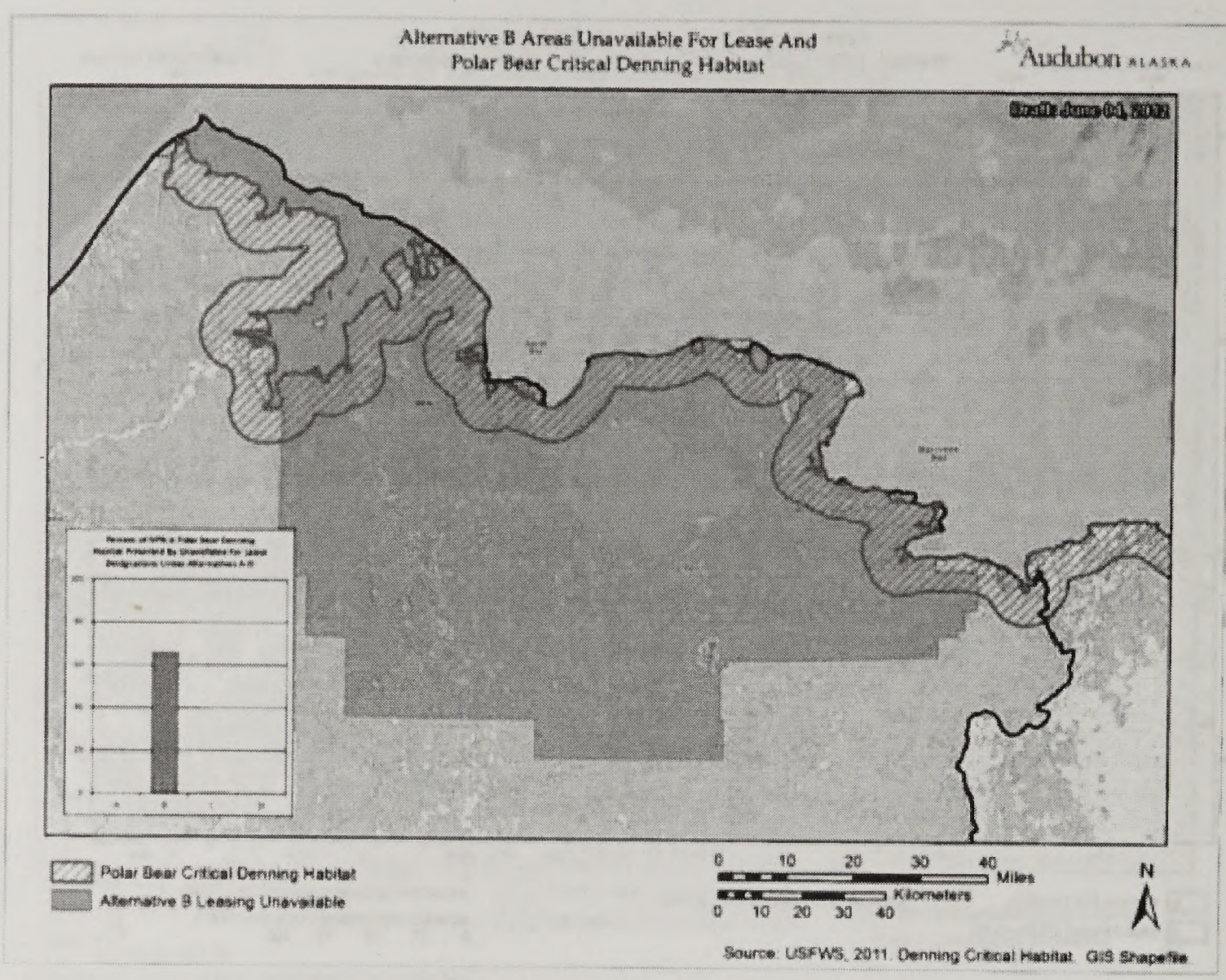
Attachment E



Attachment F



Attachment G


Alternative B Areas Unavailable For Lease And
Polar Bear Critical Denning Habitat
Audubon ALASKA
Polar Bear Critical Denning Habitat
Alternative B Leasing Unavailable
0 10 20 30 40
Miles
Kilometers
0 10 20 30 40
N
Source: USFWS, 2011. Denning Critical Habitat. GIS Shapefile

Attachment H

[Response to 22.001]
The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques. See section 2.3.5 for further discussion of the applicability of stipulations and best management practices.

[Response to 22.002]
The recommended protections fall within the range of alternatives in the IAP/EIS.

[Response to 22.003]
The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques. Waivers, exceptions, and modifications are appropriate discretionary actions when an application for an activity is received, which in the NPR-A may be decades into the future.

[Response to 22.004]
The IAP/EIS assesses the impacts of potential future roads for each alternative, including in areas near Teshekpuk Lake. Based upon the USGS's analysis of economically recoverable undiscovered oil and gas in NPR-A, and the USGS's analysis of how these comparatively small accumulations would be developed, the BLM in consultation with the USGS provided scenarios of the level of road development that is reasonably foreseeable. That discussion is in Chapter 4, Section title "Oil and Gas Exploration and Development Activities."

[Response to 22.005]
The determination of the type of NEPA that will be required for a future proposal is properly made at the time of application. In the case of onshore infrastructure to support Chukchi Sea development, the decision will be made by multiple federal agencies, not by BLM alone.

[Response to 22.006]
Prohibition of such a road has been considered, but has not been adopted. One of the purposes of this plan is to provide the opportunity to construct necessary infrastructure to support bringing oil and gas resources from the Chukchi Sea to the Trans-Alaska Pipeline System (TAPS) and/or a future gas pipeline. This infrastructure may require a road that would link NPR-A to the Dalton Highway area. The IAP/EIS analysis has considered the potential impacts of such a road as well as roads linking NPR-A processing facilities with a small number of production pads; other roads in NPR-A are not considered reasonably foreseeable.

[Response to 22.007]
Prohibition of such a road has been considered, but has not been adopted. One of the purposes of this plan is to provide the opportunity to construct necessary infrastructure to support bringing oil and gas resources from the Chukchi Sea to TAPS and/or a future gas pipeline. This infrastructure may require a road that would link NPR-A to the Dalton Highway area.

COMMUNICATION NUMBER 23
Christina Peterson, Executive Producer
Birdnote

To: Secretary of the Interior, Bureau of Land Management, Alaska Field Office
From: Christina Peterson, Executive Producer, BirdNote radio show heard by one million
Date: May 25, 2012

Regarding: National Petroleum Reserve-Alaska Integrated Activity Plan and Environmental Impact Statement

As a citizen of the United States who places high value on the extraordinary ability of birds and wildlife and who recognizes the unique nature of Alaskan habitat for birds and wildlife, I appreciate the opportunity to comment on the NPRA's proposed plan for oil and gas leasing in the four areas "...designated by the Secretary of the Interior containing any significant subsistence, recreational, fish and wildlife, or historical or scenic value."

There four areas are: the Teshekpuk Lake Special Area, the Utukok River Uplands Special Area, the Colville River Special Area, and the Kasegaluk Lagoon Special Area.

It is hard to overstate the biological importance of these areas, as can be seen in just one example. The area around Teshekpuk Lake is so rich and hospitable that it attracts and nurtures polar bears, caribou and more than 60,000 black geese, called Brant. The wetlands surrounding the lake provide a food-rich haven for arctic-breeding geese during the late weeks in summer when they are molting and cannot fly. To survive this dangerous time, they must find a place rich in food and safe from predators. The 60,000 Black Brant, represent about 20 percent of the world's population, and they go to the rich sedge meadows surrounding the Lake as do many other birds.

The Plan's Alternative A – which assumes the least intrusion is the preferred alternative. Since millions of Americans are prepared to cut back on their use of gas and oil, conservation and increased efficiency of use should be the main alternatives, rather than continued drilling.

[23.001] At present the plan reads, "Any oil and gas exploration or development within a special area 'shall be conducted in a manner which will assure the maximum protection of such surface resources to the extent consistent with the requirements of [the] Act for the exploration of the reserve'". I would rather it read, "There shall be no exploration of, and no leasing for, oil and gas in the Special Areas." I urge you to give the highest priority to managing the land for the wildlife that depends upon it.

Respectfully,

Christina Peterson
Executive Producer, BirdNote
chrisp@birdnote.org

[Response to 23.001]
One of the purposes of the NPR-A is for the exploration and development of oil and gas. Special Areas were designated to provide the maximum protection consistent with the exploration and development of the Reserve.

COMMUNICATION NUMBER 24
Kiersten Lippmann, Staff Scientist
Center for Biological Diversity

SUBMITTED VIA HAND DELIVERY

June 15, 2012

Jim Ducker
Bureau of Land Management
c/o NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508
Fax: (907) 268-4224

Re: NPR-A Draft IAP/EIS Comments

Thank you for the opportunity to comment on the Bureau of Land Management's (BLM) Draft Environmental Impact Statement (DEIS) regarding the National Petroleum Reserve Alaska (NPR-A). These comments are submitted on behalf of the Center for Biological Diversity (the Center).

The four alternatives currently included in the DEIS all would have substantial impacts to this vast and relatively pristine wilderness area, with a minimum of 50 percent of the NPR-A offered for lease sales for oil and gas development under the most environmentally protective Alternative B. Connected actions associated with commercial oil and gas development in the NPR-A include a gas pipeline to Anchorage, Alaska, another gas pipeline to Canada, the infrastructure associated with oil and gas development within the NPR-A, and a future pipeline through the NPR-A from offshore oil and gas development in the Chukchi Sea. The significant environmental impacts from offshore oil and gas development would be enabled in large part through infrastructure and pipelines on the NPR-A, and the DEIS makes it clear that this infrastructure is part of the purpose of lease sales under any alternative. Thus, offshore development is largely contingent on lease sales in the NPR-A.

The Center does not support lease sales anywhere in the NPR-A. Any development threatens to destroy the wilderness and roadless characteristics of this vast and ecologically critical area, and would allow for further ecological damage and significant amounts of greenhouse gas emissions through commercial development of oil and gas in the NPR-A and from offshore oil and gas development. Climate change impacts are a huge threat to the ecological communities of the NPR-A and the Arctic. Documented impacts and science-based predictions of climate change in the Arctic region include sea level rise, temperature increase and fluctuation, loss of sea ice, changes in ocean circulation patterns, ocean acidification, increased tundra fires, changes in vegetation type and cover, and coastal erosion, among others. The FEIS must consider the impacts of oil and gas development in the context of climate change, both in terms of the greenhouse gas emissions produced under each alternative, and cumulative impacts of habitat degradation and direct disturbance resulting from oil and gas activities.

[24.001] Due to the profoundly negative effects of oil and gas development on the ecological communities of the NPR-A, the FEIS should include an environmentally protective alternative that allows for no lease sales as the no-action alternative. **[24.002]** In the event the BLM proceeds with lease sales in the NPR-A, we urge the BLM to select a modified Alternative B as the preferred Alternative. A modified Alternative B (Alternative B+) must replace the nonbinding measures currently included in the DEIS Special Area designations with clear and legally binding language permanently protecting significant wildlife and habitat areas from oil and gas development. These protected areas must include all of the Special Areas and environmentally protective measures in the DEIS's Alternative B and should permanently

protect additional ecologically important areas in order to maintain the wilderness characteristics of the NPR-A and to provide undisturbed habitat for wildlife as sea level rise, changes in vegetation type and seasonality, and other ecological changes greatly reduce quantity and quality of inland and thermokarst habitat over the next century. These changes will be especially prevalent on the coastal plain. The environmental review of lease sales offered under any alternative must include an analysis of climate change impacts, alternatives to reduce greenhouse gas emissions, impacts on endangered, threatened and sensitive species, and mitigation measures to reduce all such impacts.

[24.003] The alternative analysis in the DEIS is incomplete and inadequate in considering the compounding impacts of climate change and oil and gas development on the ecological and wilderness characteristics of the NPR-A. While Chapter 3 of the DEIS (Affected Environment) discusses some of the potential impacts of climate change on specific resources, these impacts are not analyzed adequately in Chapter 4 (Environmental Consequences). For some important ecological resources, climate change is only given perfunctory mention but not considered in regards to oil and gas development (e.g., Vegetation section 4.3.5.4). Specifically, critical climate change issues including sea level rise, coastal erosion, and methane gas leakage and emissions receive no or little attention in the DEIS.

The DEIS fails to adequately disclose, analyze, and mitigate, inter alia, the following:

- **[24.004]** The greenhouse gas emissions from the exploration, development, production, transportation, and combustion of the oil and gas ultimately produced as a result of the lease sales under each alternative. Such analysis must include both CO2 and non-CO2 emissions (e.g., methane and black carbon) and should consider the entire lifecycle of oil and gas extracted from the NPR-A. Analysis must also include greenhouse gas emissions from the offshore oil and gas enabled by infrastructure on the NPR-A, and not be limited to greenhouse gas emissions produced by combustion engines used as part of development and exploration;

- The environmental, societal, social, economic, and health, consequences of the greenhouse gas emissions and consequent warming associated with the lease sales under each alternative;

- Climate change as a cumulative impact of the lease sales;

- Ocean acidification both as a cumulative impact of the lease sales and as an environmental baseline;

- The rapidly changing Arctic as an environmental consequence of the greenhouse emissions of the lease sales;

- Impacts of sea level rise and coastal erosion as a consequence of climate change and in conjunction with oil and gas development;

- **[24.005]** Analysis of the sensitive species and habitats affected by the lease sales, including polar bears, bowhead whales, various ice seals, walruses, and other marine mammals, seabirds, fish, invertebrates, as well as terrestrial wildlife in the context of climate change and the lease sales' cumulative impacts;

- The legal context of the lease sales, including compliance with domestic law (National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA)) and international law (United Nations Framework Convention on Climate Change);

- **[24.006]** A range of reasonable alternatives, including a viable no-action alternative that allows for no lease sales as a baseline;

- **[24.007]** Alternatives to the proposed action alternatives, including an alternative that is consistent with the call put out by leading climate scientists and incorporated in

several legislative proposals to reduce U.S. greenhouse gas emissions by 80 percent by 2050;

- **[24.008]** Instead of Special Areas that as described by the BLM do not "impede oil and gas development" (NPR-A DEIS 2.4.4), permanent protection for all important ecological areas, including all protected areas in Alternative B with additional measures and protected areas added that preclude any and all lease sales or oil and gas exploration or development. Permanent protections would be established by Wilderness designation, establishment of wildlife refuges, and/or legislatively protected BLM areas;

- All necessary mitigation measures to reduce the direct and indirect impacts of the proposed action.

Further details on each of these issues, as well as background information on the impacts of global warming, the need to reduce greenhouse gas emissions, and the species directly and indirectly affected by the leasing authorized under the alternatives in the DEIS follows.[1]

A. The National Environmental Policy Act

The National Environmental Policy Act (NEPA) is the "basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). Congress intended NEPA to "encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation." 42 U.S.C. § 4321.

To accomplish these goals, all federal agencies must assess the environmental impacts of their proposals before taking any action on them. The preparation of an Environmental Impact Statement (EIS) lies at the heart of NEPA, and must "provide full and fair discussion" of impacts such as greenhouse gas emissions and global warming implications and must "inform decision-makers and the public of the reasonable alternatives which would avoid or minimize" these impacts. 40 C.F.R. § 1502.1.

The purpose of the NEPA review process is two-fold: "First, it places upon [the action] agency the obligation to consider every significant aspect of the environmental impact of a proposed action. Second, it ensures that the agency will inform the public that it has indeed considered environmental concerns in its decision-making process." Kern v. United States Bureau of Land Management, 284 F.3d 1062, 1066 (9th Cir. 2002). See also Columbia Basin Protection Ass'n v. Schlesinger, 643 F.2d 585, 592 (9th Cir. 1981) ("[T]he preparation of an EIS ensures that other officials, Congress, and the public can evaluate the environmental consequences independently.").

These dual objectives require that environmental information be disseminated "early enough so that it can serve practically as an important contribution to the decision-making and will not be used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5. See also Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371 (1989) ("the broad dissemination mandated by NEPA permits the public and other government agencies to react to the effects of a proposed action at a meaningful time"); Metcalf v. Daley, 214 F. 3d 1135, 1143-44 (9th Cir. 2000). Ultimately, an EIS satisfies NEPA only if

> "its form, content, and preparation substantially (1) provide decision-makers with an environmental disclosure sufficiently detailed to aid in the substantive decision whether to proceed with the project in light of its environmental consequences, and (2) make available to the public, information of the proposed project's environmental impacts and encourage participation in the development of that information."

Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974). Under NEPA, BLM must fully analyze the environmental impacts of oil and gas leasing in the NPR-A, including the

greenhouse gas impacts of such leasing. The DEIS, however, is grossly inadequate in this regard.

B. Climate Change and Greenhouse Gas Emissions

The DEIS's consideration of climate change and the impact it is having on the NPR-A ecosystem is woefully inadequate. The Arctic is experiencing a cascade of related impacts from climate change that are altering the nature and function of the ecosystem. In addition to atmospheric warming, greenhouse gas emissions are leading to warmer waters, increased frequency of extreme weather events, rapidly melting sea ice, sea level rise, coastal and lakeside erosion, ocean acidification, and increased tundra fires, all of which have negative impacts on the NPR-A environment and wildlife. Without considering these changes and how they will interact with the proposed alternatives, BLM cannot make an informed decision about the relative impacts of the various alternatives. **[24.009]** Although BLM makes some attempt to consider the greenhouse gases that will be directly produced by construction activities in the four alternatives, it does not consider the greenhouse gases that will be produced by the burning of the oil and gas extracted from lands on the NPR-A (i.e., the lifecycle of the oil and gas), or from the release of methane from melting permafrost and the seafloor. There is also no analysis of the greenhouse gas emissions that will be released by offshore oil and gas development that would be enabled by lease sales in the NPR-A. Nor does the DEIS address how impacts from the already-changing climate will act cumulatively with the proposed alternatives to affect the NPR-A ecosystem. This section provides detailed information on the scientific basis for human-caused climate change, and the important negative impacts climate change will have on the function and processes of ecosystems within the NPR-A.

The scientific information and discussion throughout this discussion of climate change will provide ample evidence that a modified Alternative B (here described as Alternative B+) that mandates permanent protection for all of the protected areas, and additional permanent protections for other ecologically important areas is by far the best alternative for preserving ecological functions and processes within the NPR-A in the context of a rapidly warming climate. Alternative B+ will best allow vulnerable species in the NPR-A to adapt to the drastic climatic changes they face, without additional and serious disturbances from oil and gas development and exploration activities. Alternative B+ should include measures that provide for permanent protections from oil and gas development and exploration for all designated Special Areas included in Alternative B. Additional protections and mitigation measures under Alternative B+ should be included to protect wildlife resources and habitat, especially because important habitat areas, such as the Teshukpek Lake area, will be inundated by sea level rise within this century (Hansen et al. 2006, Pritchard et al. 2009), forcing birds, caribou and other species that depend on this area for critical biological needs such as feeding, calving, or nesting, to relocate to inland habitat further south if they survive at all. By not including an environmentally protective alternative, such as the above described Alternative B+, the BLM fails to adequately consider the vast scientific evidence regarding climate change impacts to the NPR-A. This violates NEPA requirements to "make available to the public, information of the proposed project's environmental impacts and encourage participation in the development of that information." Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974).

1. Greenhouse Gas Emissions and Climate Change

The global average temperature has risen by approximately 0.74[degrees] C ± 0.18[degrees] C (1.33[degrees] F ± 0.32[degrees] F) during the past 100 years (1906-2005) (Trenberth et al. 2007). Important advances in the detection and attribution of global warming have demonstrated, beyond any legitimate scientific debate, that a significant portion of this observed warming is due to anthropogenic greenhouse gas emissions (Barnett et al. 2005, Trenberth et al. 2007).

Past anthropogenic greenhouse gas emissions have altered the energy balance of the earth by 0.85 ± 0.15 watts per square meter (Hansen et al. 2005). Due to the lag time in the climate

system, this energy imbalance commits the earth to additional warming of 0.6? C (1? F) that is already "in the pipeline," even absent additional greenhouse gas emissions (Hansen et al. 2005).

Because greenhouse gas emissions are continuing to increase, warming is projected to accelerate. Based on differing scenarios of future greenhouse gas emissions and the world's leading climate models, the IPCC has projected 1.1? C to 6.4? C (2? F to 11.5? F) of additional warming by the end of this century (Solomon et al. 2007). The higher the level of greenhouse gas emissions, the more the world will warm.

As scientific understanding of global warming has advanced, so too has the urgency of the warnings from scientists about the consequences of our greenhouse gas emissions. Scientists are now able to tell us, with a high degree of certainty, that additional warming of more than 1[degrees] C (1.8[degrees] F) above year 2000 levels will constitute "dangerous climate change," with particular reference to sea level rise and species extinction (Hansen et al. 2006, Hansen et al. 2007). Furthermore, scientists are able tell us the atmospheric greenhouse gas level "ceiling" that must not be exceeded in order to prevent additional warming of more than 1? C (1.8[degrees] F) above year 2000 levels (Hansen et al. 2006, Hansen et al. 2007). In turn, scientists can tell us the limitations that must be placed on greenhouse gas emissions to avoid exceeding this "ceiling" of approximately 450 ppm-475 ppm of carbon dioxide (Hansen et al. 2006).

In order to stay within the ceiling, emissions must follow the "alternative," rather than the "business as usual" greenhouse gas emissions scenario (Hansen 2006, Hansen et al. 2006, Hansen et al. 2007). In the business as usual scenario, carbon dioxide emissions continue to grow at about 2 percent per year, and other greenhouse gases such as methane and nitrous oxide also continue to increase. In the alternative scenario, by contrast, carbon dioxide emissions decline moderately between now and 2050, and much more steeply after 2050, so that atmospheric carbon dioxide never exceeds 475 parts per million. The alternative scenario would limit global warming to less than an additional 1? C in this century (Hansen et al. 2006, Hansen et al. 2007).

Since the year 2000, however, society has not followed the alternative scenario. Instead, carbon dioxide emissions have continued to increase by 2 percent per year since 2000 (Hansen et al. 2006, Hansen et al. 2007). This rate of increase itself appears to be increasing (Denman et al. 2007). If this growth continues for just ten more years, the 35 percent increase in carbon dioxide emissions between 2000 and 2015 will make it impractical if not impossible to achieve the alternative scenario (Hansen et al. 2006, Hansen et al. 2007). Moreover, the "tripwire" between keeping global warming to less than 1? C, as opposed to having a warming that approaches the range of 2? C to 3? C, may depend upon a relatively small difference in anthropogenic greenhouse gas emissions (Hansen et al. 2006, Hansen et al. 2007). This is because warming of greater than 1? C may induce positive climate feedbacks, such as the release of large amounts of methane from thawing arctic permafrost, that will further amplify the warming (Hansen et al. 2006, Hansen et al. 2007).

Just ten more years on current greenhouse gas emissions trajectories will essentially commit us to climate disaster. Dr. James E. Hansen, Director of the NASA Goddard Institute for Space Studies, and NASA's top climate scientist, has stated:

> "In my opinion there is no significant doubt (probability > 99 percent) that . . . additional global warming of 2? C would push the earth beyond the tipping point and cause dramatic climate impacts including eventual sea level rise of at least several meters, extermination of a substantial fraction of the animal and plant species on the planet, and major regional climate disruptions" (Hansen 2006:30).

Studies that have used climate model projections to forecast species extinctions have predicted large species losses. Using a mid-range climate scenario, Thomas et al. (2004) predicted that 15 percent to 37 percent of species are already committed to extinction by 2050. Malcolm et al.

(2006) estimated that 11 percent to 43 percent of endemic species in biodiversity hotspots will go extinct by the end of the century under a scenario of doubled carbon dioxide concentrations, which includes an average of 56,000 endemic plants and 3,700 endemic vertebrate species.

In order to avoid truly unacceptable consequences of global warming, we must stop the growth of greenhouse gas emissions, and, in relatively short order, begin reducing them. Achieving the reductions necessary to keep additional global warming between the years 2000-2100 within 1[degree] C will be extremely challenging, and will require deep reductions in emissions from industrialized nations such as the United States. Until and unless the United States has adopted and begun to implement an effective and rational plan to reduce such emissions, we should not commit to further greenhouse gas emissions through additional oil and gas development.

2. Important Greenhouse gases

In addition to the documented impacts of CO2 on the climate, there are additional important greenhouse gases contributing to climate change, that are especially relevant to the Arctic ecosystem and must be analyzed in more detail in the FEIS.

i. Methane

[24.010] Methane release from natural and manmade sources due to the impacts from global climate change and from direct release and impacts due to oil and gas development and production may contribute a significant amount of greenhouse gas emissions to the atmosphere, and must be considered in the FEIS. Methane is a potent greenhouse gas and has contributed the second largest anthropogenic radiative forcing since pre-industrial times. Methane is a more effective greenhouse gas than CO2 on a per molecule basis, and has the potential to contribute as much carbon to the atmosphere as fossil fuel emissions (Archer et al. 2007). Over a 100-year period, methane will trap about 23 times more heat than an equal amount of carbon dioxide (Albritton et al. 2001).

Since the industrial revolution, rapid increases in human activity have led to more than a doubling of atmospheric methane concentrations (Wuebbles and Hayhoe 2002). As a result of human activities the atmospheric concentration of methane has increased by about 150 percent since 1750, continues to increase, and the current concentration of atmospheric methane has not been exceeded during the past 650,000 years (Forster et al. 2007). Anthropogenic sources account for about two thirds of emitted methane and include coal and gas production, agriculture, biomass burning, landfills, and animals (Quinn et al. 2007). There is also evidence that current carbon monoxide (CO) emissions are a cause of increasing methane concentrations (Denman et al. 2007). **[24.011]** Both terrestrial and marine sources of methane gas release within the NPR-A have the potential to be significant contributors of greenhouse gases to the atmosphere, and rate of release is directly related to climate change impacts. Release of methane provides a feedback mechanism in conjunction with climate change, further contributing to global warming. As such, the complete lack of discussion in the DEIS of methane release and its contribution to climate change and how this may directly impact the NPR-A ecosystem is a huge oversight, which must be amended in the FEIS.

A warming climate can lead to the release of methane in terrestrial and marine areas, especially at northern latitudes. In the Arctic, measurements indicate that methane emissions are increasing due to higher temperatures and the resulting disappearance of permafrost and wetter soil conditions (Zimov et al. 2006). In regions of continuous permafrost, such as the NPR-A, global warming has resulted in a degradation of the permafrost and an increase in the size and number of thaw lakes. It has been estimated that this increase in lake area has led to a 58 percent increase in methane emissions (Walter et al. 2006). As discussed in detail below methane may be released through a variety of climate change and oil and gas development mechanisms, including release of methane hydrates from thawing permafrost or seafloor sources due to increased surface temperatures, release of organic matter from thawing permafrost, and release of natural gas from pipelines or other commercial operations.

Methane frozen into hydrate is found in vast reservoirs below the sea floor and in permafrost soils along the Arctic coastline (Archer et al. 2007). Methane hydrates are approximately 164 times more concentrated than methane gas, thus a small volume of methane hydrate could liberate large volumes of gas and contribute substantial amounts of greenhouse gas to the atmosphere (Ruppel 2009). In fact, the global hydrate reservoir is so large that if just 10 percent of the methane contained in this reserve were released in the next few years, the impact on the earth's radiation budget would be equivalent to a 10-fold increase in atmospheric CO2 (Archer et al. 2007). Global warming effects have been found to destabilize these methane hydrates causing a release of methane into the water column and atmosphere (Biastoch et al. 2011). Climate change will likely release methane stored in Arctic areas first, as the Arctic Ocean is expected to warm earlier than other ocean areas, partly because of albedo feedback from the melting Arctic ice cap. Release of methane hydrate deposits may also be triggered by deep-ocean warming or by submarine landslide, both of which are linked to warmer surface temperatures (Archer et al. 2007). Methane releasing from hydrates found under the seafloor often bubbles to the ocean surface, and is then added to the atmosphere (Archer et al. 2007). Methane that does not release to the surface is oxidized to CO2 in seawater, further contributing to ocean acidification processes.

In terrestrial areas, recent studies have found large surface leaks of methane gas to the atmosphere from the Alaskan Arctic (Walter Anthony et al. 2012). These leaks are likely to increase with global warming because current observations show that methane is escaping along the boundaries of permafrost thaw and receding glaciers, which are becoming more prevalent as temperatures increase at northern latitudes (Walter Anthony et al. 2012). With a carbon store of over 1,200 Pg (1015 grams), the methane reservoir in the Arctic is huge when compared with the global atmospheric methane pool of just 5 Pg (Walter Anthony et al. 2012).

In addition to release of methane hydrates, organic matter locked in frozen permafrost may add a substantial amount of methane to the atmosphere. If 20 percent of the peat reservoir in permafrost is converted to methane and released over the next 100 years, this would double the atmospheric methane concentration by releasing 0.7 billion tons of carbon per year. Leakage of methane gas from climate change induced permafrost melting will be significant within and nearby the NPR-A. Some of the most intense melting is already occurring along the Arctic Ocean (Nelson et al. 2002). Erosion of thermokarst lake edges and coastal erosion, both driven by climate change, also drive permafrost melting, and subsequent release of methane from permafrost. In parts of Alaska the coast is receding at rates of tens of meters per year (Jones et al. 2009). Leakage of methane from inland sources could thus have significant impacts on total greenhouse gas emissions and further contribute to climate warming.

[24.012] The DEIS fails to consider direct anthropogenic leakage of natural gas. The FEIS should consider the impacts of methane gas emissions from gas development and extraction over the entire lifetime of the natural gas, and should also consider the impacts of oil and gas development on hydrology and permafrost and associated release of methane. In its brief and incomplete analysis in the DEIS, the BLM states that, "[w]hile it is not possible to know with confidence the impact of increased greenhouse gas emissions due to proposed operations within the planning area on global climate change, it is certain that it would contribute a very small amount to climate change" (DEIS 4.3.1.2). This analysis is inadequate in that not only does it not consider methane emissions from the direct development of natural gas, but it also does not even mention the impacts of oil and gas development on permafrost melting, erosion, and resulting methane release from permafrost or ocean sediment. Nor does the DEIS analyze the total contribution of oil and gas development in the NPR-A and oil and gas development offshore to worldwide greenhouse gas emissions, and their impact on permafrost melting and methane release.

[24.013] The FEIS must include detailed analyses of the estimated methane emissions under each alternative, including methane that would be released from the permafrost and submarine deposits, and associated impacts on the Arctic ecosystem through contribution to greenhouse

gas emissions and climate change. Analysis must include direct impacts from oil and gas extraction on NPR-A land, as well as impacts from offshore oil and gas extraction that would be enabled by infrastructure on the NPR-A. Additionally, analysis must include methane releases due to climate change caused melting sea ice, submarine landslide, and permafrost. The current analysis is flawed and incomplete, and severely underestimates methane emissions that will occur as a direct or indirect result of each alternative. As a result, the analysis in the DEIS does not fulfill NEPA requirements.

ii. Tropospheric ozone

Ozone functions both as a direct greenhouse gas, and as a controller of greenhouse gas lifetimes. It is thought to have caused around one third of all the direct greenhouse gas-induced warming since the industrial revolution. Modeling and studies provide evidence that tropospheric ozone concentrations have increased since pre-industrial times due to increases in emissions of anthropogenic ozone precursors, especially methane (Oltmans et al. 1998). Ozone that is produced in the northern hemisphere and mid-latitudes is most efficiently transported to the Arctic in the non-summer months. Local sources of ozone and its precursors in the Arctic and NPR-A region include marine vessel emissions, emissions from fossil fuel burning, oil and gas related support equipment, emissions from methane hydrates and releases of methane from permafrost, and emissions from gas pipelines infrastructure. Shipping emissions in the Arctic contribute directly to ozone levels, and have the potential to increase Arctic ozone levels by a factor of two or three relative to present day (Quinn et al. 2007).

Subarctic and Arctic ozone precursor emissions may be increasing as climate change causes boreal regions to warm, resulting in an increased frequency of fires in boreal areas (Kasischke et al. 2005). Fires emit large quantities of CO and non-methane volatile organic carbon (NMVOC) compounds which may combine with anthropogenic emissions in the same region to produce large amounts of ozone (Quinn et al. 2007). CO emissions from boreal fires in the spring and summer of 2003 made a substantial impact on ozone concentrations in the Arctic (Generoso et al. 2007). The projected increase in temperature and increased shrubbiness in tundra ecosystems, including that of the NPR-A, is predicted to increase fire frequency, severity and extent (SNAP 2011, Higuera et al. 2008).

Fire frequencies in the interior of Alaska are projected to be more strongly influenced by changes in vegetation patterns, which may significantly contribute to pollution levels in Arctic areas such as the NPR-A. For example, in April and May of 2006, record high concentrations of ozone were measured at the Zeppelin research station in Spitsbergen (Stohl et al. 2007). This severe air pollution episode was due to a combination of unusually high temperatures in the European Arctic and large emissions from agricultural fires in Belarus, Ukraine and Russia. As the warming of the Arctic continues to proceed more quickly than that of lower latitudes, transport of pollutants from interior Alaska or sub-arctic regions may become more frequent in the future, resulting in increased tropospheric ozone concentrations and a further increase in surface temperatures, creating a feedback mechanism (Quinn et al. 2007).

[24.014] The DEIS fails to analyze the cumulative impacts from increased shipping activity, fire, permafrost melting, and release of methane from methane hydrate source, and from oil and gas extraction on tropospheric ozone concentrations and the resulting increase in climate warming and impact on wildlife and ecosystems of the NPR-A. Such analysis must be included in the FEIS and analyzed thoroughly for each alternative.

iii. Black Carbon

Black carbon is a significant contributor to Arctic warming that is not adequately considered in the DEIS. Black carbon, or soot, consists of particles or aerosols released through the inefficient burning of fossil fuels, biofuels, and biomass (Quinn et al. 2007). Unlike greenhouse gases, which warm the atmosphere by absorbing long-wave infrared radiation, soot has a warming impact because it absorbs shortwave radiation, or visible light (Chameides and Bergin 2002). Black carbon is an extremely powerful greenhouse pollutant. Scientists have described the

average global warming potential of black carbon as about 500 times that of carbon dioxide over a 100-year period (Hansen et al. 2007, Reddy and Boucher 2007). This powerful warming impact is remarkable given that black carbon remains in the atmosphere for only about four to seven days, with a mean residence time of 5.3 days (Reddy and Boucher 2007).

Black carbon contributes to Arctic warming through the formation of "Arctic haze" and through deposition on snow and ice, which increases heat absorption (Quinn et al. 2007; Reddy and Boucher 2007). Arctic haze results from a number of aerosols in addition to black carbon, including sulfate and nitrate (Quinn et al. 2007). The effects of Arctic haze may be to either increase or decrease warming, but when the haze contains high amounts of soot, it absorbs incoming solar radiation and leads to heating (Quinn et al. 2007).

Soot also contributes to heating when it is deposited on snow because it reduces the reflectivity of the white snow and instead tends to absorb radiation. A recent study indicates that the direct warming effect of black carbon on snow can be three times as strong as that due to carbon dioxide during springtime in the Arctic (Flanner 2007). Black carbon emissions that occur in or near the Arctic contribute the most to the melting of the far north (Reddy and Boucher 2007; Quinn et al. 2007).

Reductions in black carbon therefore provide an extremely important opportunity to slow Arctic warming in the short term, and mitigation strategies should focus on within-Arctic sources and northern hemisphere sources that are transported by air currents most efficiently to the Arctic. Conversely, allowing black carbon emissions to increase in the Arctic as the result of oil and gas development, increased shipping, or other industrial activity will accelerate Arctic warming and consequent loss of tundra ponds and the seasonal sea ice, contributing to the extinction of the polar bear and other species. Black carbon reductions will also provide air quality and human health benefits. **[24.015] Numerous direct and indirect impacts of the leasing proposed under the alternatives of the DEIS will result in substantial releases of black carbon in the Arctic. This factor is not considered in the DEIS, and must be thoroughly analyzed for each alternative in the FEIS.**

3. Climate Change Impacts to the NPR-A

The rising temperatures in Alaska have significant repercussions for the species and resources of the NPR-A. In addition to atmospheric warming, greenhouse gas emissions are leading to warmer waters, sea level rise, rapidly melting sea ice, increased frequency of extreme weather events, increasing ocean acidification, and higher incidence of tundra fires, all of which have negative impacts on the NPR-A environment and wildlife. Without considering these changes and how they will interact with the proposed alternatives, the BLM cannot make an informed decision about the relative impacts of the various alternatives.

Climate change and ocean acidification represent significant long-term threats to the survival of many of the species in the NPR-A. Climate change is affecting the far northern latitudes at a greater rate than the rest of the world. Over the past 50 years Alaska has warmed at more than twice the rate of the rest of the United States' average (USGCRP 2009). Annual average temperature in Alaska has increased 1.9°C, while winters have warmed by 3.5°C, which has contributed to earlier spring snowmelt, sea-ice loss, widespread glacier retreat, and permafrost warming (USGCRP 2009). This trend is expected to continue. Alaska's annual temperatures are projected to rise by an average of 4.5°C by the end of the century (range: 3°C -7.4°C) under a mid-level emissions scenario (Christensen et al. 2007: Table 11.1). These temperature changes will result in a variety of impacts to the vegetation and wildlife in the NPR-A.

As the following discussion of specific impacts of climate change in the NPR-A demonstrates, climate change is already impacting, and will continue to impact key species and resources of the NPR-A. Such changes are likely to lead to a reduction of available breeding habitat and prey for the threatened, endangered and sensitive species of the NPR-A, compromising their chances of survival and recovery. As the effects of global warming increase over the foreseeable future, these impacts will become all the more severe.

i. Sea Level Rise and Coastal Erosion

[24.016] The climate change analysis conducted by Scenarios Network for Alaska and Arctic Planning (SNAP), for this DEIS, completely fails to include sea level rise or coastal erosion in its assessment. This failure to analyze sea level rise and coastal erosion is a major gap in the BLM's analysis of environmental impacts. The DEIS does briefly mention sea level rise during discussion of the impacts of climate change in the Affected Environment section, but does not analyze the effects of sea level rise in the context of oil and gas exploration and development in Environmental Consequences. Impacts from coastal erosion and sea level rise include a reduced terrestrial area, degradation of wildlife habitat, and direct impacts to construction and activities related to oil and gas exploration and extraction that may require changes in the location of development or additional mitigation measures. Erosion and inundation of freshwater ponds with brackish water will further degrade wildlife habitat. Decreases and degradation of wildlife habitat on the coastal plain from coastal erosion and sea level rise will adversely impact many wildlife species, including special status species, which use these plains as breeding, nesting, and feeding grounds. **[24.017]** The FEIS must analyze impacts from coastal erosion and sea level rise in regards to wildlife habitat and combined with cumulative impacts from oil and gas development. The FEIS must also consider sea level rise and coastal erosion in regards to its impact on oil and gas infrastructure. Structures may become inundated by sea water, undermined by erosion, or rendered unstable by slumping and changes in soil stability.

Sea level rise in many regions of the Arctic is advancing much faster than the global average, with particularly rapid increases in sea level occurring in recent years (Richter-Menge et al. 2007). Although the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report projected a global mean sea-level rise in the 21st century of 18 cm–59 cm, the IPCC acknowledged that this estimate did not represent a "best estimate" or "upper bound" for sea-level rise because it assumed a negligible contribution from the melting of the Greenland and west Antarctic ice sheets (IPCC 2007: 45). Recent studies documenting the accelerating ice discharge from the Greenland and Antarctic ice sheets indicate that the IPCC projections are a substantial underestimate (Hansen et al. 2006, Pritchard et al. 2009). Recent studies that have attempted to improve upon the IPCC estimates have found that a mean global sea level rise of at least one to two meters is highly likely within this century (Rahmstorf 2007, Pfeffer et al. 2008, Vermeer and Rahmstorf 2009, Grinsted et al. 2010, Jevrejeva et al. 2010). Studies that have reconstructed sea-level rise based on the geological record, including oxygen isotope and coral records, have found that larger rates of sea-level rise of 2.4 m to 4 m per century are possible (Milne et al. 2009). This map illustrates that a large portion of the important wildlife habitat of the coastal plain would be inundated under a four-meter sea level rise scenario. Critically, Teshekpuk Lake would be under sea water if this amount of sea level rise occurred. Therefore, protections of wildlife areas in the FEIS must take into consideration this predictable future loss of coastal plain, which could occur within the next 50 years, and include permanent protections for upland wildlife areas.

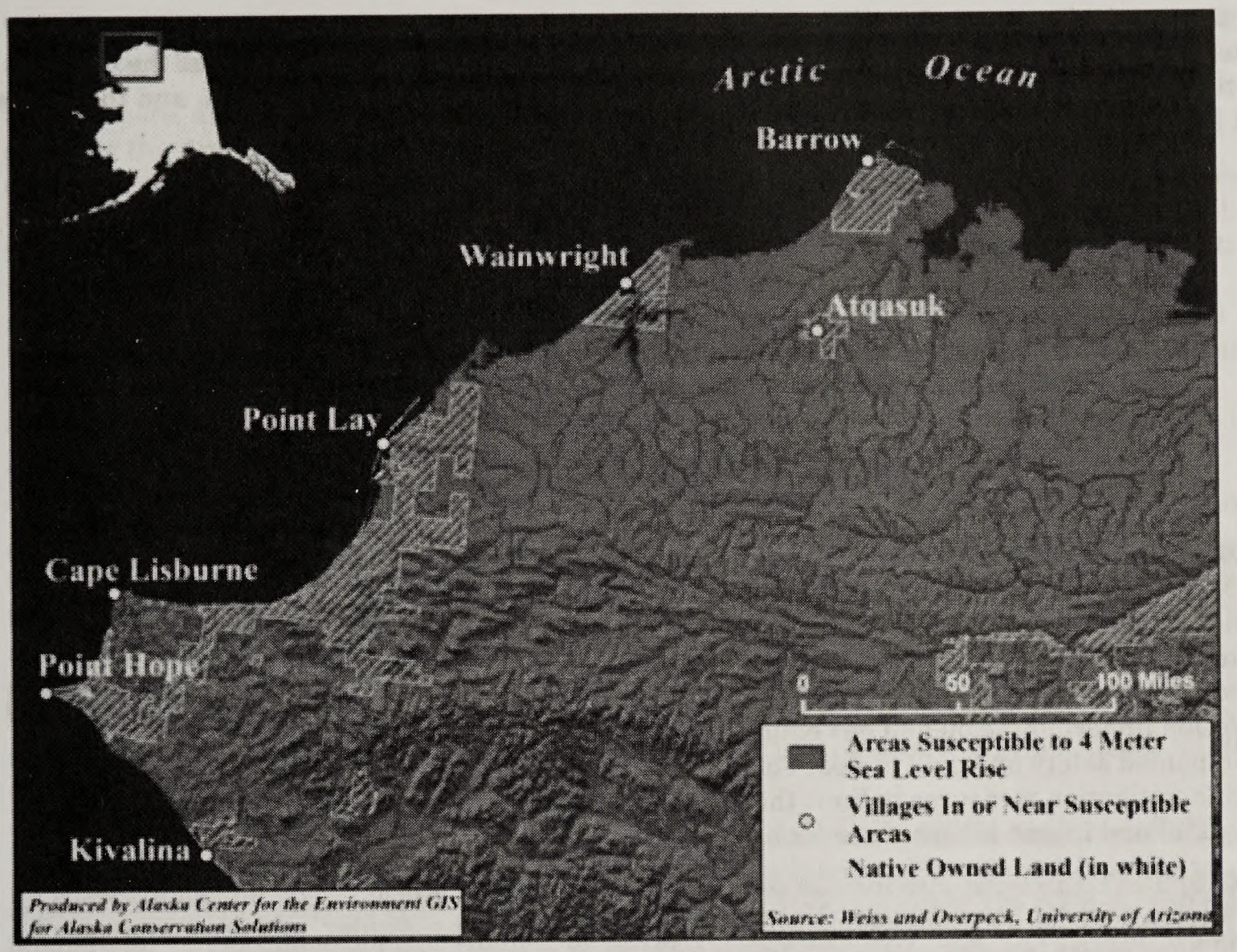


Figure 1. Areas susceptible to a 4 meter sea level rise in the NPR-A and North Slope of Alaska. Source: Weiss and Overpeck, University of Alaska. Produced by Alaska Center for the Environment GIS for Alaska Conservation Solutions. Available at: http://northern.org/media-library/maps/arctic/arctic-climate-change-impacts-maps/GWSeaLevelRiseWestWEBlg.jpg/view

In addition to sea level rise, Arctic shorelines are eroding at an accelerated rate due to the combined effects of sea-ice loss, increasing sea surface temperatures, increasing terrestrial permafrost degradation, rising sea levels, and increases in storm power and corresponding wave action (Jones et al. 2009). Increasing coastal erosion jeopardizes species such as the polar bear, caribou, walrus, seabirds and waterfowl that use coastal habitats within the NPR-A. Sea level rise is an especially important consideration in the northern portion of the NPR-A, where there is a vast array of wildlife, and the coastal plains are especially low-lying.

A recent published study documented a doubling of coastal erosion rates in the Teshekpuk Lake area. Mars et al. (2007) concluded that "most of this additional land loss is attributed to the breaching of thermokarst lakes by coastal erosion and the subsequent flooding of those thermokarst depressions by marine water." Such loss of pond habitat is consistent with global warming:

> the results are consistent with climate change trends that have resulted in warming of permafrost and shrinking summer pack ice in the Arctic Ocean. The former would render permafrost coastal bluffs and inland lakeshores more susceptible to erosion by waves and headward erosion of ephemeral streams, respectively, and the latter would increase wave fetch and contribute to more intense summer storms.
> (Mars et al. 2007).

Another study documented a different climate-related dynamic that also results in the loss of waterbird breeding ponds such as those in the NPR-A. Smol et al. (2007) document the loss of Arctic ponds from desiccation in a warming climate. The effects on the ecosystem, and the eiders and loons dependent on that ecosystem are likely to be severe:

> A key "tipping point" has now been passed: Arctic ponds that were permanent water bodies for millennia are now ephemeral. The ecological ramifications of these changes are likely severe, and will cascade throughout the Arctic ecosystem (e.g., waterfowl habitat and breeding grounds, invertebrate population dynamics and food for insectivores, drinking water for animals, etc.). Furthermore, lower water levels will have many indirect environmental effects, such as further concentration of pollutants. Ironically, high Arctic ponds, which are such important bellwethers of environmental change, are now disappearing because of climatic warming.
> (Smol et al. 2007).

[24.018] Such accelerated erosion represents a significant threat to the species and resources of the NPR- A that should have been evaluated in the DEIS. For example, the DEIS states that erosion along the Beaufort Sea coast and the shore of Teshekpuk Lake required a series of winter mobilizations to plug and abandon four wells (NPR-A DEIS 4.7.3.1). With scientifically based predictions of increases in coastal erosion and erosion of inland lakeshores, such incidents of erosion undermining oil and gas equipment are likely to become commonplace, with accompanied safety and spill issues. The FEIS must include analysis of these impacts and specific mitigation measures to limit the contributing impact oil and gas development may have on coastal and inland lakeshore erosion.

[24.019] The DEIS must also include sea level rise and coastal erosion in its impact analyses and stipulations for best management practices. Inundation by seawater, and coastal erosion would have major impacts under all alternatives, and would be exacerbated by oil and gas development on the coastal plain. Additionally, the cumulative impacts from greenhouse gas emissions from the oil and gas throughout its lifecycle, and contribution to climate warming and sea level rise in the Arctic, must be included in analysis.

ii. Melting Sea Ice

Climate change is dramatically affecting sea ice in the Arctic, an important habitat element for many animals in the NPR-A. The lowest summer sea ice minimum on record was reached on September 16, 2007. The record low of 4.13 million square kilometers (1.59 million square miles) was far less than the previous record low of 5.32 million square kilometers (2.05 million square miles) in 2005 (NSIDC 2007). The last five years (2007-2011) have been the five lowest summer sea ice minima on record. Sea ice extent is important for a variety of animals in the NPR-A and adjacent waters, including polar bears and ice seals. The EIS must thoroughly analyze the impacts to these species of losing their sea ice habitat.

iii. Ocean Acidification The oceans are acidifying at an alarming rate, with particularly profound impacts in Northern waters. The world's oceans are an important part of the planet's carbon cycle, absorbing large volumes of carbon dioxide and cycling it through various chemical, biological, and hydrological processes. The oceans have thus far absorbed approximately 30 percent of the anthropogenic carbon dioxide emitted since the beginning of the industrial revolution (Feely et al. 2004). A primary impact of ocean acidification is that it depletes seawater of the carbonate compounds— aragonite and calcite—that many marine creatures need to build shells and skeletons (Orr et al. 2005, Fabry et al. 2008, Feely et al. 2009). As a result, ocean acidification hinders organisms such as corals, crabs, seastars, sea urchins, and plankton from building the protective armor they need to survive. Rising acidity also affects the basic functions of fish, squid, invertebrates, and other marine species and has detrimental effects on metabolism, respiration and photosynthesis, which can thwart growth and lead to

higher mortality (Fabry et al. 2008). Because of its serious impacts to so many species, ocean acidification threatens to disrupt the entire marine food web.

Furthermore, an ever-growing body of scientific studies indicates that ocean acidification is affecting the Arctic more rapidly and is profoundly altering Arctic waters. The scientific evidence is as follows: (1) ocean acidification is a predictable consequence of rising atmospheric CO2 (Feely et al. 2009); (2) the waters of the high-latitude Pacific-Arctic region are among the most vulnerable to ocean acidification because mixing and lower temperatures create conditions with lower pH and saturation state values (Fabry et al. 2009, Mathis 2011); (3) seasonal aragonite undersaturation is already occurring in the Bering Sea (Fabry et al. 2009, Mathis 2011, Mathis et al. 2011 a,b); (4) a variety of species, including fish, squid and crustaceans are negatively impacted by ocean acidification in laboratory experiments at acidification levels expected in this century (Fabry et al. 2008, Guinotte et al. 2008); and (5) ocean acidification is irreversible for tens of thousands of years after emissions cease (Richardson et al. 2009).

The first obvious declines will affect the especially vulnerable planktonic species, foraminifera and pteropods, which form calcium carbonate shells in the form of aragonite and have been found to be susceptible to increased ocean acidification, and the resulting undersaturation of the forms of calcium carbonate required to form their exoskeletons. These planktonic species are abundant in Alaskan waters and form the basis of the marine food chain. Reductions in the production of planktonic species due to increased CO2 emissions and resulting ocean acidification processes could negatively impact all species in the marine food chain, including salmon, other fish species, coral, whales, seals, walruses, polar bears, and other Alaska wildlife species.

[24.020] When burned for heat or energy, natural gas and oil produce vast amounts of CO2, which contribute to ocean acidification. The FEIS must include analysis of contributions to ocean acidification from the entire lifecycle of oil and gas development in the NPR-A, and from offshore oil and gas development enabled by infrastructure on the NPR-A. Ocean acidification will have profound impacts on the Arctic marine food chain. These impacts from climate change and acidification are not speculative or in the distant future; they are happening now. Virtually no species in the NPR-A will be unaffected over the coming decades.

iv. Changing climate and fire dynamics

Tundra burning impacts vegetation composition, nutrient cycling, and permafrost, and is an important feedback mechanism linking CO2-induced climate warming to Arctic environmental change (Mack et al. 2011, Higuera et al. 2011). Tundra fires may also impact subsistence resources, including caribou populations (Joly et al. 2010). There is increasing evidence linking Arctic warming and loss of sea ice to tundra fire regimes. In 2010 the largest number of fires on record occurred in the Noatak National Preserve, which is located just south of the NPR-A, above the Arctic Circle by the Brooks Range in Northern Alaska (Hu et al. 2010, Higuera et al. 2011). As climate warming trends continue, it is expected that tundra fires will increase north of this area, including the NPR-A.

A warming climate will cause rapid permafrost degradation (Lawrence et al. 2006), enhance drainage in upland tundra ecosystems, and increase shrub cover, further exacerbating susceptibility of tundra to late season fires (Higuera et al. 2008, Hu et al. 2010). Recent studies have demonstrated the direct biological and physical impacts of tundra fires on arctic ecosystems (Liljedahl et al. 2007). Notably, studies find that the rare incidence of large and severe fires in the tundra biome has been an important contributing factor to the role of tundra ecosystems as a major carbon sink over ecological history (Zimov et al. 2006). As tundra fires increase, there will be an associated release of soil carbon, which may alter the role of tundra ecosystem in the global carbon cycle (Hu et al. 2010). As a result, the tundra ecosystem may no longer function as a CO2 sink and instead become a CO2 source, as stored CO2 is released.

[24.021] The DEIS fails to properly analyze the significant role fire may play on the future ecological conditions in the NPR-A, and the impacts these changing conditions may have on

wildlife species, especially those dependent on lichens as a food source. The SNAP analysis used as a basis for the DEIS estimates a slight increase in fire probability by 2100, and the Affected Environment section includes fire as a serious threat to terrestrial mammals, but this analysis fails to include the risks of increased fires in interior Alaska and resulting increased air pollution in the Arctic, and also fails to accurately project the future risk of fire due to sea ice melt and drying of the tundra ecosystem. Thus, tundra and boreal forest burning impacts are not adequately assessed in the Environmental Consequences section. Additionally, increased fire intensity and frequency in the NPR-A land area itself will intensify oil and gas development's impacts on permafrost, vegetation, and wildlife, and alter the CO2 feedbacks, resulting in a substantially increased release of greenhouse gases. The impact of increased greenhouse gases, especially methane, related to tundra and boreal burning must be analyzed in the FEIS.

4. Economic Costs of Greenhouse Gas Emissions Must Be Considered

[24.022] In its NEPA analysis, BLM should have evaluated the economic costs of greenhouse gas emissions from both the exploration and extraction activities as well as the consumption of the produced oil and gas. Important peer-reviewed literature exists on estimating the social costs of climate change and quantifying the cost of carbon dioxide emissions (Stern 2006). As this field has developed, the methodology and inclusiveness of economic studies has improved. At the same time, the scientific understanding of global warming impacts and predictive ability has also improved. The result is that the estimated cost of greenhouse gas emissions in the literature has increased steadily, and we now know that the cost of continued greenhouse gas emission trajectories would be astronomical (Stern 2006). While monetizing the impact of greenhouse gas emissions cannot substitute for a full discussion of all impacts under NEPA, an estimate of the economic costs should be included.

Researchers have concluded that $73/tc[2] (year 2010) is a reasonable figure for decision makers to use as a lower benchmark of the economic cost of greenhouse gas emissions, but this figure rises sharply over time (Downing et al. 2005). An upper benchmark is more difficult to deduce from the current literature, but the risk of higher values for the social cost of carbon is significant (Downing et al. 2005, Watkiss et al. 2005). One widely respected report commissioned for the British government recommended that decision makers use the range of values displayed in Table 1.

Table 1: Economic Cost of Carbon: Values for Use in Project Appraisal (USD per ton carbon) (Source: Adapted from Watkiss et al. 2005:ix)[3]

Year of Emission	Central Guidance	Lower Central Estimate	Upper Central Estimate
2000	$101	$64	$238
2010	$119	$73	$293
2020	$146	$91	$375
2030	$183	$119	$475
2040	$256	$165	$603
2050	$384	$238	$768

The Stern Review of the Economics of Climate Change, another comprehensive report commissioned by the British government, recently concluded that allowing current emissions trajectories to continue unabated would eventually cost the global economy between five and 20 percent of GDP each year within a decade, or up to $7 trillion, and warned that these figures should be considered conservative estimates (Stern 2006). By contrast, measures to mitigate

global warming by reducing emissions were estimated to cost about one percent of global GDP each year (Stern 2006). **[24.023]** The DEIS's utter failure to look at the economic costs of the greenhouse gas emissions generated by the various alternatives violates NEPA. This analysis must be included in the FEIS. Analysis must calculate estimated GHG emissions by alternative, based on the above discussion of GHGs and using a full life-cycle estimate of emission produced from any oil and gas produced at NPR-A and related sites (e.g., offshore development).

C. Impacts on wildlife

The actions considered under the DEIS will have significant direct and cumulative impacts on wildlife in the NPR-A, including many species of birds, caribou, wolverine, polar bears, ice seals, and walruses. The DEIS's treatment of this issue is inadequate. The proposed lease sales under all alternatives in the DEIS and the resultant greenhouse gas emissions are consistent with the business as usual scenario that will lead to polar bear, ice seal and walrus extinction (Hansen et al. 2006, Hansen et al. 2007). Just ten more years on current greenhouse gas emissions trajectories will essentially commit us to climate disaster that will impact not just sea-ice dependent species, but all Arctic wildlife. GHG emissions and climate change will result in widespread changes to the ecosystem dynamic of the NPR-A, changing vegetation, seasonal timing, and precipitation patters. Ocean acidification will impact important calcifying plankton at the base of the Arctic marine food web, with widespread repercussions on marine life, including seabirds. In the FEIS, the BLM must analyze not just the direct impacts of oil and gas leasing in the NPR-A and subsequent exploration, development and production, on wildlife, but also the greenhouse emissions of the oil and gas produced from these sales. Also, the FEIS must include analysis of the cumulative impacts of climate change on species, broken down by each alternative and taking into account the lease sales' impact on greenhouse gas emissions and global climate change. The rising temperatures in Alaska have significant repercussions for the species and resources of the NPR-A. Major impacts will occur within the next 50 years for most Arctic species, and this must be included in the FEIS analysis.

1. Endangered Species Act

Section 7 of the ESA requires that BLM consult with the appropriate wildlife services agencies to ensure that the lease sales do not jeopardize threatened or endangered species or adversely modify their critical habitat. 16 U.S.C. § 1536(a)(2). Section 7 consultation is required for "any action [that] may affect listed species or critical habitat." 50 C.F.R. § 402.14. Agency "action" is defined in the ESA's implementing regulations to include

> all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas. Examples include, but are not limited to: (a) actions intended to conserve listed species or their habitat; (b) the promulgation of regulations; (c) the granting of licenses, contracts, leases, easements, rights-of-way, permits, or grants-in-aid; or (d) actions directly or indirectly causing modifications to the land, water, or air.

50 C.F.R. § 402.02. See also Pacific Rivers Council v. Thomas, 30 F.3d 1050, 1054-55 (9th Cir. 1994), cert. denied, 514 U.S. 1082 (1995) (recognizing that Congress intended "agency action" to be interpreted broadly, admitting of no limitations).

When a proposed action may affect a protected species, consultation must occur and be completed before the federal action may take place. Pacific Rivers, 30 F.3d at 1056; Thomas v. Peterson, 753 F.2d 754, 764-65 (9th Cir. 1985). The action agency consults with the appropriate wildlife agency. The National Marine Fisheries Service (NMFS) has primary responsibility for administering the ESA with regards to most marine species, including whales and most marine mammals, while the U.S. Fish and Wildlife Service (FWS) has responsibility for terrestrial species, as well as some marine mammals, and all seabirds. During the course of consultation, NMFS or FWS may "suggest modifications" to the action to "avoid the likelihood of adverse effects" to the listed species. 50 C.F.R. § 402.13. At the completion of consultation, NMFS or

FWS issues a Biological Opinion (BO) that determines if the agency action is likely to jeopardize the species. See 50 C.F.R. § 402.02. If so, the agency may not proceed with any program, permit, or decision that would jeopardize a species' survival unless the BO specifies reasonable and prudent alternatives that will avoid jeopardy and allow the agency to proceed with the action. 16 U.S.C. § 1536(b). See also Sierra Club v. Marsh, 816 F.2d 1376, 1384-86 (9th Cir. 1987) (enjoining highway construction because agency could not meet burden of absolute assurance that mitigation required to avoid jeopardy was possible).

Although procedural, consultation is the backbone of the ESA. As the Ninth Circuit recognized, "[o]nly by requiring substantial compliance with the act's procedures can we effectuate" congressional intent to protect species. Sierra Club v. Marsh, 816 F.2d at 1384 (9th Cir. 1987).

The opening up of any areas of the NPR-A to oil and gas lease sales affects ESA-listed species. Numerous listed species inhabit the NPR-A and adjacent waters. These include the bowhead whale, humpback whale, fin whale, polar bear, and spectacled and Steller's eiders. Additionally, the ringed seal, bearded seal, Pacific walrus, yellow-billed loon and the Kittlitz's murrelet have been petitioned for listing and are likely to be listed during the implementation of the proposed lease sales. Moreover, these species as well as other listed species are vulnerable to global warming, and therefore the greenhouse gas emissions of the leases may affect species. BLM must complete consultation with NMFS and FWS on the impacts of both the direct impacts (e.g., noise, oil spills) and indirect impacts (greenhouse gas emissions) of the lease sales and other management decisions regarding the NPR-A. Furthermore, any action to lease areas around Teshekpuk Lake is inconsistent with the agency's obligation to avoid jeopardizing Steller's and spectacled eiders.

i. Impacts on Threatened Polar Bears

The EIS must analyze the direct, indirect and cumulative impacts on ESA-listed polar bears. Polar bears are completely dependent on sea ice for hunting, migration, and other activities necessary for their survival. Due to global warming, the habitat of the polar bear is literally melting away (ACIA 2004, Derocher 2004). The United States Geological Survey concluded that reduced sea ice would result in loss of approximately two-thirds of the world's polar bear population within 50 years, including all of Alaska's polar bears (Amstrup et al. 2007). Oil and gas activities in the NPR-A and their resultant greenhouse gas emissions will contribute to polar bear extinction. **[24.024]** **BLM must analyze not only the direct impacts of oil and gas activities in the NPR-A on the polar bear, but also the greenhouse emissions of the oil and gas produced from these activities. Additional research and impact analysis must also be conducted in light of the recent observations of diseased polar bears, and the developing possibility of a unique mortality event for polar bears in the NPR-A.**

ii. Impacts on Ice Seals

Ice seals, including ribbon seal, bearded seal, spotted seal, and ringed seal, are dependent on sea ice for survival, and threatened by many human activities including shipping, oil and gas development, and hunting. Climate change is the largest threat of all, and if greenhouse gas emissions continue at the current rate, scientist predict that sea ice in the seals' ranges could decline 40 percent by mid-century, leading to widespread pup mortality (Holland et al. 2006, Wang and Overland 2009). Oil and gas activities in the NPR-A and their resultant greenhouse gas emissions will contribute to ice seal extinction. Ice seals also face severe and immediate threats from offshore oil and gas developments, which have the potential to destroy or modify large portions of the seals' foraging and breeding habitat and exert lethal and sub-lethal impacts on population from oil and noise pollution and through direct disturbance and harassment (Fair and Becker 2000). Ocean acidification, which is predicted to increase rapidly in the Arctic waters, may disrupt the marine food chain, resulting in widespread and deadly impacts to ice seals (Orr et al. 2005).

[24.025] **Offshore oil and gas development would be enabled by infrastructure in the NPR-A, and these impacts to ice seals must be analyzed in the FEIS.** The FEIS must also analyze the

total contributions of greenhouse gas emissions enabled by or directly resulting from oil and gas development within the NPR-A, broken down by each alternative. BLM must analyze not only the direct impacts of oil and gas activities in the NPR-A on polar bear, but also the greenhouse gas emission of the oil and gas produced by these activities and the activities that may occur in the Chukchi and Beaufort seas, that would be enabled by infrastructure on the NPR-A. Additional research, impact analysis, and mitigation measures, including permanently protected areas and caps on total greenhouse gas emissions resulting from the oil and gas development must also be conducted in light of the developing unique mortality event in ice seals, and the unknown but possibly spreading deadly disease process recently observed in these seals.

a. Ribbon Seal

In 2007, the Center filed a petition with NMFS to protect the ribbon seal under the ESA due to threats to its habitat from global warming. In December, 2008, NMFS denied the ribbon seal ESA protection, despite overwhelming scientific evidence showing the ribbon seal was in danger of extinction due to climate change. In September 2009, the Center and Greenpeace field suit against the National Oceanic and Atmospheric Administration for denying protections to ribbon seal. Pursuant to a settlement agreement, NOAA will release a new 12-month finding on ESA listing of this species by December 10, 2012. The ribbon seal depends on sea ice for crucial activities, from resting to molting to raising young. The ribbon seals' winter sea-ice habitat in the Bering and Okhotsk Seas is predicted to decline by 40 percent by mid-century under a mid-level emissions scenario (Wang and Overland 2009). **[24.026]** Impacts to ribbon seals from oil and gas development in the NRP-A are dismissed in the DEIS because ribbon seals occur far offshore. However, the DEIS did not consider impacts to the species resulting from oil and gas development greenhouse gas emissions and their contribution to climate change. The FEIS must analyze impacts to ribbon seals by alternative based on the greenhouse gas emissions that would be produced or enabled by each alternative. Cumulative impact analysis must reflect this.

b. Ringed, Spotted and Bearded Seals

The Center petitioned NMFS to grant ESA protection to bearded, ringed, and spotted seals in 2008. On October 21, 2010, the Obama administration finalized protection for the spotted seal in China and Russia, but denied protection for the spotted seal in the United States (75 FR 65239). On December 3, 2010, NMFS proposed ESA protection for bearded and ringed seals (75 FR 7746, 75 FR 77496). A final listing decision was due on June 10, 2012, and should come out at any time (76 FR 77476). Ringed, spotted and bearded seals are dependent on sea ice for biological life functions. The Bering, Okhotsk, and Barents Seas are projected to lose at least 40 percent of winter sea-ice area by 2050 (Wang and Overland 2009). Any remaining sea-ice habitat will likely be of low quality because the sea ice will be thinner and the ice will melt sooner, leading to breakup of the sea ice during the reproductive and molting periods. The DEIS fails to analyze the impacts from oil and gas lease development caused greenhouse gas emissions on ringed, spotted and bearded seals. It also fails to acknowledge that greenhouse gas emissions resulting from development on or enabled by NPR-A leases could contribute to climate change. The DEIS states that the "effects of climate change on . . . ringed and bearded seals are uncertain." **[24.027]** This is despite a pending listing of threatened under the ESA for bearded and ringed seals, and a huge body of scientific evidence showing that ringed, spotted and bearded seals are under threat of extinction by mid-century due to climate change-induced sea ice loss and other factors, including increased oil and gas development in the area. The FEIS must analyze impacts to ringed, bearded and spotted seals by alternative based on the GHG emissions that would be produced or enabled by each alternative. Once a listing decision is issued for these species by NMFS, the FEIS must be amended based on these species' listing status. Cumulative impact analysis must reflect this.

iii. Impacts on Pacific Walruses

The DEIS acknowledges that the main concern for the Pacific walrus population is climate change, which is causing a dramatic loss of its sea ice habitat and has a potential to change prey distribution and abundance. The DEIS also states that walruses are utilizing coastal areas differently due to the lack of late summer sea ice. The DEIS states that the K-6 Stipulation applies to alternatives B through D, but that a pipeline development corridor could be sited anywhere along the Chukchi coastline under alternative D. **[24.028] Although the DEIS goes on to acknowledge that the combined threats to walrus, including offshore oil and gas development and emerging diseases could become "significant in combination with future effects of climate change," there is no analysis of how different alternatives may contribute to climate change and to other threats. This analysis must be included in the FEIS.**

In February, 2008, The Center petitioned the FWS to protect the walrus under the ESA. On February 8, 2011, the FWS announced that listing the Pacific walrus was warranted but precluded and delayed protection for this species indefinitely by putting the walrus on the candidate list (76 FR 7634). Pursuant to a settlement agreement, FWS will make a listing decision by 2017. Thus, the FWS acknowledges that the Pacific walrus is deserving of protection. **[24.029] The FEIS should consider additional protections for Pacific walrus, including but not limited to, permanent wildlife refuge designation for critical walrus habitat along the length of the Chukchi coastline, especially Kasegaluk Lagoon, and a cap on greenhouse gas emissions enabled by, or tied to oil and gas leases.** This is due to the documented negative impacts on walruses from climate change-caused lack of sea ice and other climate change issues (Cooper et al. 2006). These protections must be stronger than the suggestions for Special Areas in the DEIS, so that oil and gas lease sales will never be allowed to occur in these important walrus habitat areas.

2. Unusual Mortality Event

In the last 12 months, there have been several outbreaks of skin lesions resulting in unusual mortality events in Alaska's marine mammals, particularly ice seals. On October 13, 2011, National Oceanic and Atmospheric Administration (NOAA) scientists observed a skin lesion disease outbreak in ringed seals. On December 20, 2011, NOAA and FWS declared an unusual mortality event involving multiple species including ice seals and walruses after scientists observed more than 60 dead ringed seals and more than 75 diseased seals in the Bering Sea and Arctic Alaska. Scientists also observed diseased and dead walruses at a mass haul-out near Point Lay.

This disease appears to be persisting in ice seal populations to present, resulting in illness and mortality. On March 7, 2012, a news release by NOAA reported that a ringed seal pup was captured in Yakutat, AK, with similar skin and fur loss symptoms to diseased seals in the Arctic (NOAA 2012). As the spring 2012 subsistence harvest of marine mammals continues, more diseased animals are likely to be observed. Winter conditions in 2011-2012 made for extremely unsuitable conditions for making observations in the Arctic and Bering Sea. Thus, the current status of the disease, and how it may have affected winter survival for marine mammals, is unknown (NOAA 2012). Once the summer field season research is completed, more information on the origins of the disease may be available, and must be included in the FEIS.

Polar bears may also be affected by a similar disease, manifested by hair loss and skin lesions that appear very similar to lesions found in diseased seals. As of April 6, 2012, field scientists had found hair loss on nine of the 33 bears they had captured. Unlike diseased seals and walruses, the bears with skin lesions appear to be healthy otherwise (Feidt 2012).

[24.030] The cumulative impacts of the ongoing unusual mortality events for Arctic marine mammals must be considered in the EIS, as they may have significant adverse impacts on ice seal, polar bear and walrus populations. Even if the disease does not directly result in mortality of affected polar bears, impacts to ice seals, the bear's primary prey, could significantly impact polar bear survival, reproductive success, and overall population numbers. While the cause of the disease is unknown, thus far it has not been linked to any known viruses, bacteria or

radiative causes (NOAA 2012). This disease may be linked to increased susceptibility of marine mammals to normally non-disease causing pathogens due to a variety of increased stressors from climate change, increased human activity (especially shipping and oil and gas operations), and higher levels of pollutants in the Arctic (Heimel 2012). Stress related to climate change and human disturbance can have a variety of effects on an organism, one of which is to reduce resistance to disease (Martin et al. 2010). The illness may simply be a manifestation of these stressors. Marine mammals that otherwise would be resistant to a common pathogen (possibly bacterial or fungal in origin) may become susceptible when stressed by the rapidly changing and developing conditions in the Arctic.

Thus, offshore drilling activities that would be enabled by infrastructure on the NPR-A, in addition to the stressors that will occur with climate change (as described above) could increase the incidence of mortality events for marine mammals in the Arctic. Stressors on marine mammals may also be directly related to development and exploration activities on the NPR-A land area, which increases a variety of stressors on wildlife, including sound, direct human-caused disturbance, degradation of habitat due to development and increased release of methane and other greenhouse gases. Because of the strong link between NPR-A oil and gas development and offshore oil and gas development that would both act as a cumulative impact and be directly enabled by infrastructure on the NPR-A, the recent and ongoing unusual mortality events for Arctic marine mammals must be discussed both in the cumulative impacts section, and in direct environmental consequences of any alternative that increases oil and gas development in the Arctic, including the "no action" alternative.

[24.031] Because the unusual mortality event is a developing issue, involving difficult-to-study and remote populations of marine mammals, the EIS must be updated after this winter's (2011 to 2012) mortality and disease data is compiled and when and if a disease pathogen is identified by scientists. If the disease continues to progress and result in high levels of mortality for the already stressed ice seal, walrus and polar bear populations, new mitigation measures and protected habitat areas must be included in the FEIS. Lease sales of any part of the NPR-A based on the current DEIS impact and mitigation statements must not be completed until this unusual mortality event is included.

D. Alternatives and Mitigation

1. Range of Alternatives

BLM did not consider a reasonable range of alternatives and mitigation measures to reduce impacts on the environment. NEPA requires that the EIS "'rigorously explore and objectively evaluate all reasonable alternatives' to a proposed plan of action that has significant environmental effects. 40 C.F.R. § 1502.14(a) (2000). This is 'the heart' of an EIS." Natural Resources Defense Council v. U.S. Forest Service, 421 F.3d 797, 813 (9th Cir. 2005). The purpose of NEPA's alternatives requirement is to ensure agencies do not undertake projects "without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." Envt'l Defense Fund., Inc. v. U.S. Army Corps. of Eng'rs, 492 F.2d 1123, 1135 (5th Cir. 1974); see also, City of New York v. Dept. of Transp., 715 F.2d 732, 743 (2nd Cir. 1983) (NEPA's requirement for consideration of a range of alternatives is intended to prevent the EIS from becoming "a foreordained formality."); Utahns for Better Transportation v. U.S. Dept. of Transp., 305 F.3d 1152 (10th Cir. 2002), modified in part on other grounds, 319 F3d 1207 (2003). Whether an alternative is "reasonable" or not turns on whether it will accomplish the stated purpose for the project. City of Carmel-By-The-Sea v. U. S. Dep't of Transp., 123 F.3d 1142, 1155 (9th Cir. 1997).

Importantly, this evaluation extends to considering more environmentally protective alternatives and mitigation measures. See, e.g., Kootenai Tribe of Idaho v. Veneman, 313 F.3d 1094,1122- 1123 (9th Cir. 2002) (and cases cited therein). NEPA regulations require that alternatives "include appropriate mitigations measures." 40 C.F.R. § 1502.14(f). Additionally,

the regulations require that the analysis of environmental consequences discuss "means to mitigate adverse environmental impacts." 40 C.F.R. § 1502.16(h).

An environmental review document must fully disclose and analyze impacts to any listed, candidate, or sensitive species, and discuss alternatives and enforceable mitigation measures to avoid, reduce, and mitigate impacts to the species.

Under this standard, BLM's range of alternatives is inadequate. **[24.032]** For example, BLM should have considered alternatives that promote the reduction of greenhouse gas emissions, such as limiting lease sales. The DEIS completely failed to do this, even failing to include a viable no-action alternative that would simply not allow any lease sales in the NPR-A.

[24.033] An alternative in which no further leasing in the NPR-A occurs, until and unless it is part of and consistent with a national plan to reduce greenhouse gas emissions by 80 percent by 2050, the levels top climate scientists such as Dr. Hanson indicate are necessary to avert the most disastrous impacts of global warming, is a completely reasonable alternative. In fact, it is an absolutely essential alternative if we as a nation are to successfully address the climate crisis. The failure to analyze such an alternative, or for that matter any alternatives that increase environmental protections in the NPR-A, itself is evidence of an inadequate NEPA process.

2. The No Action Alternative

The "no-action" alternative included in DEIS analysis does not fulfill BLM's obligation under NEPA, thus rendering subsequent analysis of the Environmental Consequences under each alternative inaccurate and incomplete. NEPA requires that alternative analysis in the EIS "include the alternative of no action." 40 C.F.R. § 1502.14(d). Under NEPA, "no action" means that the proposed activity would not take place. The purpose of the "no action" alternative is to provide a benchmark, enabling decision-makers to compare the magnitude of the environmental effects of the action alternatives. Inclusion of such an analysis in the DEIS is necessary to inform Congress, the public, and the president as intended by NEPA. 40 C.F.R. § 1500.1(a). **[24.034]** Because there is currently no commercial oil and gas development in the NPR-A, the current "no action" alternative is an "action" alternative, as defined by NEPA, rather than a baseline. A valid "no action" alternative would be an alternative that provides for no leasing and for no commercial oil and gas development to occur. This baseline would describe conditions currently and historically occurring at the NPR-A, where there are no commercial oil and gas developments.

[24.035] In the DEIS, all alternatives, including the so-called "no action" alternative, allow for an "action" of oil and gas lease sales that would result in the construction of permanent infrastructure and would directly lead to degradation of wildlife habitat and ecological resources in vast swathes of the NPR-A, affecting from 50 percent to 100 percent of the land area depending on the alternative. As described in the DEIS, the very foreseeable activities associated with oil and gas development would have major impacts on ecological resources. Such impacts have not occurred at any time in the history of the NPR-A. Thus, labeling Alternative A, which would open up over 50 percent of the NPR-A to oil and gas leasing, a "no action" alternative does not meet BLM's NEPA obligations.

By framing the alternatives this way, BLM avoided its obligation under NEPA to evaluate the potential impacts of the proposed action. Alternative A as the "no action" alternative assumes very similar levels of activity as Alternative B. This denies BLM and the public a baseline from which to analyze the impacts of the "action" alternatives. The establishment of the baseline biological condition of an affected area is a practical requirement of the NEPA process because "without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA." Half Moon Bay Fisherman's Mktg. Ass'n v. Carlucci, 857 F. 2d 505, 510 (9th Cir. 1988). By using a false "no action" alternative that assumes a baseline of activity that has not yet occurred, BLM illegally avoids its obligation under NEPA to consider the impacts of its actions.

E. The Designation of Special Areas

The Special Areas recommended in Alternative B are simply suggestions, with no permanent protections for these areas. The weak protections provided by the Special Area designation could be readily changed by successive administrations. The BLM says as much, and states that "Special Area designation does not itself impede oil and gas development" (NPR-A DEIS 2.4.4) and that "Special Area designation itself does not impose specific protections" (NPR-A DEIS 2.1.2). Thus, according the DEIS, it appears that designated Special Areas could be opened to oil and gas development without any changes to the Special Area designation. This highlights the complete lack of any real protection from oil and gas development provided by this designation. As written, these protections are profoundly weak, and do little, if anything, to prevent permanent oil and gas development anywhere in the Reserve, including Special Areas.

The Center and other groups have requested that the BLM provide permanent protections for special areas, by establishment of wildlife refuges, Wilderness designations, or legislatively protected BLM areas (i.e., Wild Lands designations). The DEIS dismisses these requests, stating that a Wilderness designation is "beyond the scope of this planning effort" (NPR-A DEIS 2.4.1), that the BLM no longer considers Wild Lands in its planning process (NPR-A DEIS 2.4.2), and that National Wildlife Refuge establishment is "beyond the scope of this planning effort" (NPR- A DEIS 2.4.6). These dismissals are put forth with no explanation or discussion, and therefore do not fulfill the need of a planning document as a true document of the planning process. **[24.036]** Rather than the nonbinding measures currently put forth in the DEIS, the FEIS should include a definitive statement of administrative policy on this matter. Based on reasons discussed in great detail throughout this comment letter, we believe that the FEIS should include clear, meaningful, and permanent protections for all Special Areas proposed in Alternative B, along with permanent protections for additional ecologically important areas in the NPR-A.

F. Cumulative Effects

NEPA requires a thorough analysis of cumulative effects. The DEIS fails in this regard as well. The most significant cumulative effects to the resources of the NPR-A are those associated with global warming as discussed above. The DEIS's treatment of such effects is superficial at best and often inaccurate. This alone renders the DEIS legally infirm under NEPA.

Additionally, the other significant source of cumulative effects on the resources of the NPR-A is further oil and gas leasing and development activity, both in the immediate vicinity of the NPR-A, and elsewhere in the range of the species dependent on the NPR-A. The majority of the North Slope has either already been leased or is subject to a pending proposal for leasing. The species of the NPR-A and adjacent waters, such as the polar bear, ice seals, walruses and yellow-billed loon face the very real risk of having much of their currently suitable habitat rendered unsuitable within the very near (and clearly foreseeable) future.

While disturbance and development of the terrestrial habitat of the North Slope is of the greatest concern for species dependent on the region, **[24.037]** BLM must also examine the significant threat posed to the species by offshore oil and gas development. Shell is in the final stages of receiving permits for its planned 2012 oil and gas exploration programs in the Beaufort and Chukchi seas. These areas are all either foraging habitat or wintering habitat for the eiders and loons that nest in the NPR-A. Because yellow-billed loons and eiders forage offshore of their breeding areas, as well as in their wintering areas, they are highly vulnerable to direct impacts from offshore development. Additionally, construction and operation of offshore facilities will result in increased helicopter activity over onshore breeding areas along with other land-based disturbances related to servicing offshore operations. These offshore activities will affect not only waterbirds, but also polar bears, walruses, and other marine mammals.

As shown in Figure 2, the NPR-A and adjacent lands and waters are home to variety of species, and all wildlife using the Alaskan Arctic will be negatively impacted by oil and gas development and climate change. Impacts from offshore drilling that would be enabled by infrastructure on

the NPR-A, as stated repeatedly but not analyzed in the DEIS, will have major adverse impacts on marine mammals and on the marine ecosystem. Offshore oil and gas development will at the very least result in incidental harassment of marine mammals due to increased ship traffic, seismic testing, and operation of drill rigs. However, the impacts from offshore oil and gas leasing have a high potential to be much greater, in the event of a major blowout, gas leak, or oil spill. As climate warming contributes to more severe and more frequent storm events, offshore drilling and shipping may be subject to extreme storm events, resulting in the possibility of large oil spills. Impacts on wildlife in the NPR-A from offshore drilling must be analyzed.

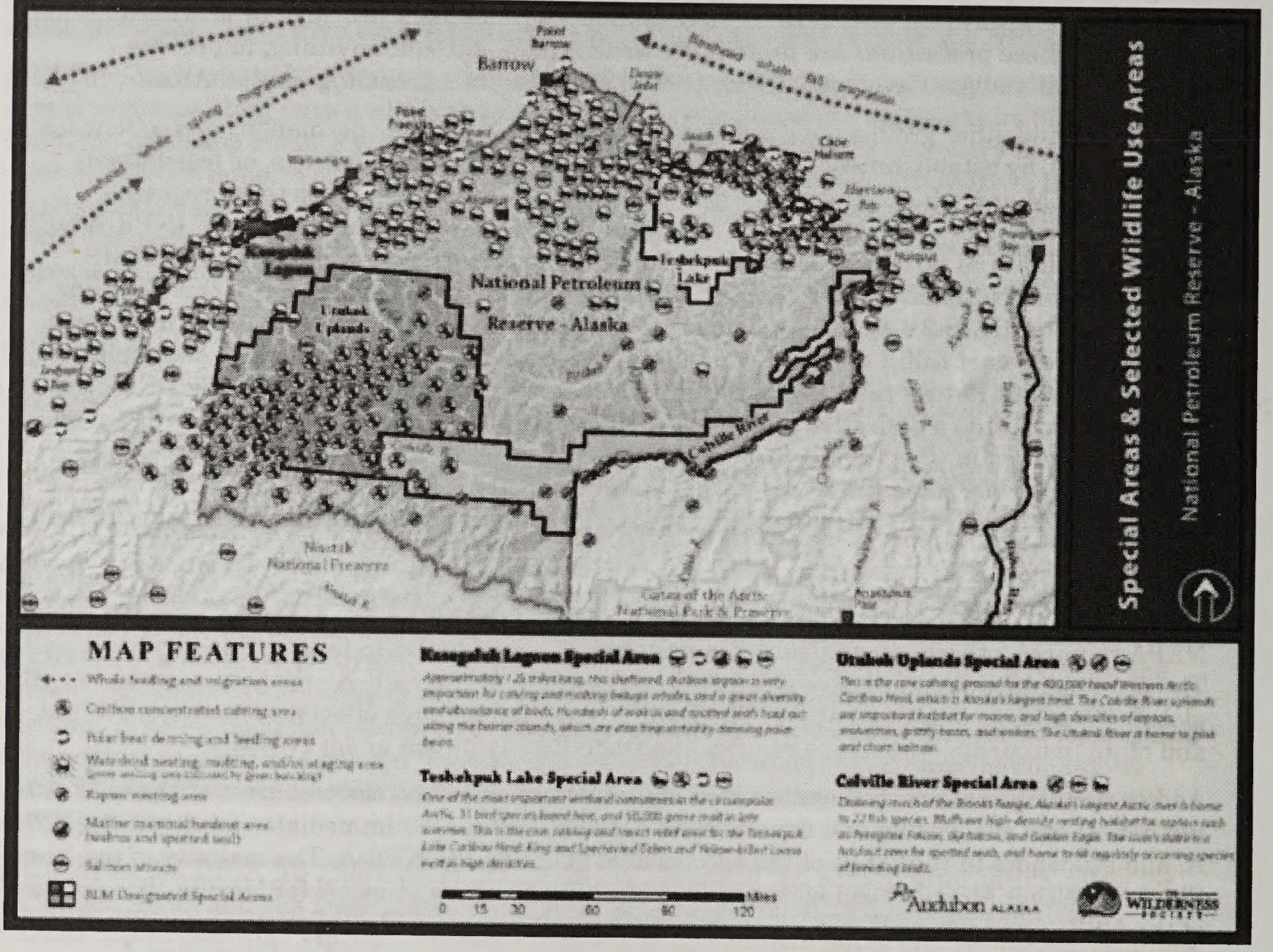


Figure 2. Wildlife species of the NPR-A area. Source: The Wilderness Society and Audubon, Alaska. Available at: http://wilderness.org/content/obama-proposing-new-leasing-western-arctic-reserve

[Preamble 24.038] Readily available information about the cumulative impacts of oil and gas activities both onshore and offshore in Alaska demonstrates significant cumulative effects on the resources of the NPR- A. However, these impacts are only superficially analyzed in the DEIS. This is not legally adequate. While less information is available about such activities and their impacts in Canada and Russia, what information that does exist indicates reason for concern and highly significant cumulative impacts.

In Canada, there are numerous proposals for oil and gas development in the Arctic as shown in Figure 3. The largest of these is the proposed Mackenzie Gas Project, which would likely result in wide-scale impacts to the Mackenzie River Delta and adjacent areas. Shell Canada Energy, Imperial Oil Resources and ExxonMobil Canada Properties received final approvals on March 2, 2012. This project will have major adverse impacts on wildlife and wildlife habitat, and also contribute a significant amount of GHGs. Yellow-billed loons are known to breed just to the east

of the Delta.[4] The development of oil and gas resources in the Canadian Arctic would have comparable deleterious impacts on the yellow-billed loons and other sensitive waterbirds nesting in the region as similar development in the NPR-A and other areas of Alaska. Further detail on oil and gas projects in the Canadian Arctic is contained in the 2006 status review prepared by FWS for the polar bear (Schliebe et al 2006).

Figure 3. Oil and Gas Leases and proposed protected Areas in the Canadian Arctic. Source: Pew Environment Group. Available at: http://oceansnorth.org/becoming-arctic-ready

What information that is available regarding the impacts of oil and gas development in the Russian Arctic indicates likely disaster for the yellow-billed loon and other waterbirds. Both breeding areas for Russian nesting loons as well as marine wintering areas for Alaska nesting birds are subject to rapid industrial development in the Russian Arctic. Additional information on Russian Arctic oil development is contained in Schliebe et al (2006). The DEIS is devoid of discussion of such significant impacts.

An additional cumulative impact to the Arctic ecosystem of which the NPR-A is a part is the ongoing and projected increase in shipping in the Arctic. Such impacts are likely to be substantial, and information on them is readily available. See, e.g., www.informaglobalevents.com/event/arcticshippingnorthamerica. Yet these foreseeable and substantial impacts are not discussed in the DEIS.

Another major cumulative impact not mentioned in the DEIS is the unusual mortality events for marine mammals, as discussed in detail in the marine mammal section.

[24.038] Finally, many of the species dependent on the NPR-A, such as the yellow-billed loon, Pacific brant, and buff-breasted sandpiper, migrate from breeding or molting grounds in the NPR-A to wintering areas in North and South America and elsewhere. Many of these wintering grounds are undergoing rapid transformation, resulting in substantial cumulative effects on these species. There is little to no discussion of such impacts in the DEIS.

G. Conclusion

In sum, to further the goals of NEPA and provide full consideration and disclosure of the environmental consequences of the management of the NPR-A, BLM must take into account in its FEIS the direct, indirect and cumulative impacts of its proposal, including global warming impacts. BLM must analyze the greenhouse gas emission from the use of the fossil fuels produced from the lease sales that would be allowed under the various alternatives. Additionally, BLM must analyze the potential impacts on the wildlife and the environment in the lease sale area from further global warming. BLM should consider these impacts from its actions, all cumulative impacts affecting the species and communities in the Alaskan Arctic, and adjacent areas directly and indirectly affected by the lease sales. BLM must also take steps to avoid and mitigate all of these adverse effects of the lease sales. Unfortunately, this DEIS accomplishes none of these objectives. We believe that the only conclusion compatible with NEPA, the ESA, and common sense is to forgo the proposed lease sales entirely, withdraw the DEIS, and proceed with a new NEPA process that includes alternatives to increase protection of the NPR-A and the Arctic and reduce greenhouse gas emissions. Thank you for the opportunity to provide these comments.

Sincerely,

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[1] We also join in and incorporate by reference the critique of the DEIS contained in the coalition comment letter
submitted by the Wilderness Society and other groups to the degree such comments are consistent with these.

[2] tc = tonne carbon = 3.664 tons of carbon dioxide.

[3] Figures from Watkiss et al. 2005:ix were converted from GBP (£) to USD ($) with the exchange rate calculator at http://coinmill.com/GBP_USD.html on July 18, 2006 and rounded to the nearest dollar.

[4] For the official Canadian government description of planned oil and gas activities in the Canadian Arctic see http://www.aadnc-aandc.gc.ca/eng/1310583842498. For an analysis of the cumulative impacts of these proposed activities, see http://pubs.aina.ucalgary.ca/misc/74859.pdf.

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[Response to 24.001]
An alternative that would not support an "expeditious program of competitive leasing of oil and gas," which is required in the NPRPA, as amended, would not be consistent with the purpose and need of the plan. See sections 1.1 and 1.5.

[Response to 24.002]
Providing "permanent" protection, such as through creation of Wilderness Areas or designation as a Wildlife Refuge, is not consistent with the purposes and need of the plan or with current law and regulation. See discussions in "Alternatives Considered But Eliminated from Detailed Analysis" in Chapter 2.

[Response to 24.003]
Sea level rise and coastal erosion are included in the discussion of climate change found in Chapters 3 and 4. Methane and gas leakage is addressed in Section 4.2.2.2.

[Response to 24.004]
When compared to the total U.S. emissions of carbon dioxide, each alternative would contribute miniscule amounts of direct emissions to national levels. Moreover, a determination of specific air pollutant emissions and potential impacts cannot be made until site-specific development activities are proposed.

Environmental and economic impacts of greenhouse gas emissions from oil and gas consumption are not effects of the NPR-A planning decision as defined by the Council on Environmental Quality, and thus are not required to be analyzed under NEPA. Greenhouse gas emissions from consumption of NPR-A oil and gas are not direct effects under NEPA because they do not occur at the same time and place as the action. They are also not indirect effects because NPR-A oil and gas leasing and production would not be a proximate cause of greenhouse gas emissions resulting from consumption. Also, because the impacts of consumption are not direct or indirect effects of the proposed action, a cumulative impact analysis would not reveal an incremental effect attributable to the proposed NPR-A leasing decision.

There is no reliable methodology to assess the relation between leasing in NPR-A and changes in nationwide or worldwide oil and gas consumption levels. Leasing and future development of NPR-A will not measurably increase consumption, nor would a decision to forego leasing measurably reduce consumption. Consumption of oil and gas is driven by a variety of complex interacting factors including energy costs, energy efficiency, availability of other energy sources, economics, demography, and weather or climate. If the proposed leasing and anticipated development were not to occur in the NPR-A, consumption levels of oil and gas would essentially be unaffected with the potential production from NPR-A replaced by a combination of imports, fuel switching, and other domestic production. While on a national basis lower levels of domestic oil and gas production could occur and may trigger some modest conservation measures having some benefits in terms of reduced greenhouse gas emissions, no single leasing decision would be expected to result in any discernible responsive conservation measures. This is particularly true with regard to NPR-A where the actual productive capacity is currently an unknown. Furthermore, it is not known whether or to what extent NPR-A oil and gas would be refined into plastics or other products that will not be burned, what mix of vehicles or power plants might utilize the product, or what mitigation measures would offset any such consumption.

Moreover, the BLM does not regulate fuel consumption or carbon emissions at any level; nor does the BLM dictate the destination of the oil and gas produced from a federal lease or the products to be refined from it, which would determine the emissions produced. Even if it were possible to causally connect greenhouse gas emissions from consumption to leasing in NPR-A, the effects from consumption are not only speculative but beyond the scope of agency authority or control. While the Energy Information Administration has reported emissions from a variety of petroleum products (e.g., aviation gasoline, motor gasoline, etc.), natural gas and other gaseous fuels (e.g., methane, landfill gas, etc.), electricity, coal, and renewable sources, an attempt to translate this information into emissions from the ultimate consumption of the oil

and gas produced from NPR-A would be a highly speculative exercise unnecessary for the land management decisions for which BLM is responsible.

As to offshore oil and gas development, its potentially synergistic effects are discussed in Section 4.7.3.2.

[Response to 24.005]
The IAP/EIS addresses the effects of climate change for each of these resources, without addressing the cumulative impacts of lease sales, for the reasons given in the comment response above.

[Response to 24.006]
An alternative that would not support an "expeditious program of competitive leasing of oil and gas," which is required in the NPRPA, as amended, would not be consistent with the purpose and need of the plan. See sections 1.1 and 1.5. The no action alternative described in this plan properly describes the existing management of NPR-A consistent with Council of Environmental Quality guidance.

[Response to 24.007]
The alternatives considered in the IAP/EIS include the full range consistent with law and regulation.

[Response to 24.008]
Providing "permanent" protection, such as through creation of Wilderness Areas or designation as a Wildlife Refuge, is not consistent with the purposes and need of the plan or with current law and regulation. See discussions "Alternatives Considered But Eliminated from Detailed Analysis" in Chapter 2.

[Response to 24.009]
The IAP/EIS addresses the effects of climate change, without addressing the cumulative impacts of leasing in NPR-A, for the reasons given in an earlier comment to this letter.

Additionally, on May 24, 2008, The U.S. Geological Survey issued a memorandum entitled "The Challenges of Linking Carbon Emissions, Atmospheric Greenhouse Gas Concentrations, Global Warming, and Consequential Impacts." This memo "summarized some of the latest climate results from the science community in defining CO_2 loading from individual actions and specific biological responses." It concluded:

"[H]uman-induced global warming can be observed and verified at global to continental scales where cumulative GHG concentrations can be measured and modeled. Climate impacts, however, are observed at specific locations, at much more specific and localized scales-incongruent with the global scale of the aforementioned measured and modeled climate forces. It is currently beyond the scope of existing science to identify a specific source of CO_2 emissions and designate it as the cause of specific climate impacts at an exact location."

[Response to 24.010]
The IAP/EIS discusses direct impacts of methane release in Section 4.2.2.2. As stated in an earlier comment response, greenhouse gas emissions from consumption of NPR-A oil and gas are not direct effects under NEPA because they do not occur at the same time and place as the action.

[Response to 24.011]
Section 3.2.1.1 has been revised to recognize methane gas release as a contributor to climate change.

[Response to 24.012]
The IAP/EIS discusses direct impacts of methane release in Section 4.2.2.2. As stated in an earlier comment response, greenhouse gas emissions from consumption of NPR-A oil and gas are not direct effects under NEPA because they do not occur at the same time and place as the action.

[Response to 24.013]
Section 3.2.1.1 has been revised to recognize methane gas release due to climate change, and the impact analysis has been modified to acknowledge that methane emissions would likely occur under each alternative and from actions within the cumulative analysis.

[Response to 24.014]
Section 3.2.1.1 has been revised to acknowledge the many contributors to methane gas release, and the impact analysis has been modified to acknowledge that methane emissions would likely occur under each alternative and from actions within the cumulative analysis.

[Response to 24.015]
The air quality impact sections have been modified to analyze the potential black carbon impacts from the alternatives.

[Response to 24.016]
Sea level rise and coastal erosion are included in the discussion of climate change found in Chapters 3 and 4.

[Response to 24.017]
Sea level rise and coastal erosion are included in the discussion of climate change found in Chapters 3 and 4.

[Response to 24.018]
As stated in Section 2.5, Coastal erosion is being monitored on BLM-managed lands in arctic Alaska, including the NPR-A (began 1997). The IAP/EIS discusses the cumulative impacts associated with coastal erosion in numerous subsections, including but not limited to those for soils, water, vegetation, fish, birds, and mammals. See also Stipulation/Best Management Practice K-6 which provides for substantial coastal setbacks.

[Response to 24.019]
Sea level rise and coastal erosion are included in the discussion of climate change found in Chapters 3 and 4. As stated in previous comment responses, environmental and economic impacts of greenhouse gas emissions from oil and gas consumption are not effects of the NPR-A planning decision as defined by the Council on Environmental Quality, and thus are not required to be analyzed under NEPA. The designation of lands as unavailable for, or deferred from oil and gas leasing, and the imposition of protections (like coastal, river, and lake setbacks and buffers) through stipulations and best management practices provide protection to these waterbodies..

[Response to 24.020]
As stated in a previous comment response, when compared to the total U.S. emissions of carbon dioxide, each alternative would contribute miniscule amounts of direct emissions to national levels. Moreover, a determination of specific air pollutant emissions and potential impacts cannot be made until site-specific development activities are proposed. Environmental and economic impacts of greenhouse gas emissions from oil and gas consumption are not effects of the NPR-A planning decision as defined by the Council on Environmental Quality, and thus are not required to be analyzed under NEPA. Also, it's beyond the scope of existing science to identify a specific source of CO2 emissions and designate it as the cause of specific climate impacts at an exact location.

[Response to 24.021]
The IAP/EIS acknowledges the potential for increased fire both in the Arctic and in boreal forests in the discussion of potential trends in the environment due to climate change in Chapter 3. The SNAP model also described the drying of tundra in NPR-A and its potential for increased fire.

[Response to 24.022]
As stated in previous comment responses, environmental and economic impacts of greenhouse gas emissions from oil and gas and consumption are not effects of the NPR-A planning decision

as defined by the Council on Environmental Quality, and thus are not required to be analyzed under NEPA. Additionally, it is beyond the scope of existing science to relate a specific source of greenhouse gas emission or sequestration, such as exploration and extraction activities in the NPR-A, with the creation or mitigation of any specific climate-related environmental effects. In other words, although the effects of greenhouse gas emissions in the global aggregate are well-documented, it is currently impossible to determine what specific effect greenhouse gas emissions resulting from a particular activity might have on the environment. Further, since the specific effects of a particular action, which may contribute to or mitigate against climate change, cannot be determined, it is equally impossible to determine whether any of these particular actions will lead to significant climate-related environmental effects.

[Response to 24.023]
As stated in previous comment responses, environmental and economic impacts of greenhouse gas emissions from oil and gas extraction and consumption are not effects of the NPR-A planning decision as defined by the Council on Environmental Quality, and thus are not required to be analyzed under NEPA. Additionally, it is beyond the scope of existing science to relate a specific source of greenhouse gas emission or sequestration, such as exploration and extraction activities in NPR-A, with the creation or mitigation of any specific climate-related environmental effects.

[Response to 24.024]
A working group of Arctic researchers has been established under the framework of an Unusual Mortality Event that is studying emerging disease conditions in several northern pinnipeds.[3] Because some polar bears have been found in the Beaufort Sea with hair loss and skin lesions, the research effort in 2012 included clinical sampling of polar bears captured for other research projects; preliminary examinations indicate the skin lesions observed in polar bears are distinct from those observed in seals and walruses. Polar bears will not be included as part of the Unusual Mortality Event until there is more evidence linking the illnesses. The understanding of the polar bear disease condition is too preliminary to allow meaningful impact analysis, other than the recognition that it may be an emerging disease condition in a portion of the polar bears that utilize the NPR-A.

As stated in previous comment responses, environmental and economic impacts of greenhouse gas emissions from oil and gas extraction in NPR-A are not effects of the NPR-A planning decision as defined by the Council on Environmental Quality, and thus are not required to be analyzed under NEPA.

[Response to 24.025]
Offshore oil and gas development and potential effects on ice seals are adequately discussed in Volume 4 and under the Cumulative Effects section of Chapter 4. Cumulative Effects is the appropriate section in which to discuss this; direct and indirect effects is not. Cumulative Effects, Marine Mammals section of Chapter 4 also notes that effects of offshore oil and gas exploration and development are thoroughly analyzed in several Minerals Management Service (MMS) and Bureau of Ocean Energy Management (BOEM) documents, including the newly released FEIS [U.S. Department of the Interior, Bureau of Ocean Energy Management (USDOI BOEM). 2012. Outer Continental Shelf Oil and Gas Leasing Program: 2012-2017. Final Programmatic Environmental Impact Statement. USDOI, BOEM, Headquarters. Herndon, VA. OCS EIS/EA BOEM 2012-030. 2,057 pp.] and in the 2011 National Marine Fisheries Service (NMFS) DEIS [NMFS. 2011. Effects of Oil and Gas Activities in the Arctic Draft Environmental Impact Statement. NOAA Fisheries. Office of Protected Resources. December 2011.]

[Response to 24.026]
Offshore oil and gas development and potential effects on ice seals are adequately discussed in

[3] http://alaskafisheries.noaa.gov/protectedresources/seals/ice/diseased/ume_qa0612.pdf

Volume 4 and under the Cumulative Effects section of Chapter 4. Cumulative Effects is the appropriate section in which to discuss this; direct and indirect effects is not. Cumulative Effects, Marine Mammals section of Chapter 4 also notes that effects of offshore oil and gas exploration and development are thoroughly analyzed in several MMS and BOEM documents, including the newly released FEIS [U.S. Department of the Interior, Bureau of Ocean Energy Management (USDOI BOEM). 2012. Outer Continental Shelf Oil and Gas Leasing Program: 2012-2017. Final Programmatic Environmental Impact Statement. USDOI, BOEM, Headquarters. Herndon, VA. OCS EIS/EA BOEM 2012-030. 2,057 pp.] and in the 2011 NMFS DEIS [NMFS. 2011. Effects of Oil and Gas Activities in the Arctic Draft Environmental Impact Statement. NOAA Fisheries. Office of Protected Resources. December 2011.]

[Response to 24.027]
Although climate change effects on sea ice habitat are primary concerns for ice seals, including ringed, bearded, and spotted seals, none of these species were determined to be in danger of extinction by mid-century. Following the status review of spotted seals (Boveng et al. 2009), NMFS determined that only the Southern Distinct Population Segment (DPS), which occurs in the Yellow Sea and Sea of Japan, warranted a threatened status (75 FR 65239, October 22, 2010). By definition, a threatened species is "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (Cameron et al 2010). The Okhotsk and Bering Sea DPSs, the latter of which occurs in the NPR-A area, were not considered in danger of extinction or likely to become endangered in the foreseeable future and were not listed under the ESA (74 FR 53683, October 20, 2009). Two DPSs of bearded seals and two subspecies of ringed seals were proposed for listing as threatened. The date for final determination regarding the proposed rule for listing was extended to June 10, 2012 (76 FR 77465, Dec 13, 2011; 76 FR 77466, Dec 13, 2011). The determination has not yet been published. Assuming it is prior to completion of the FEIS, text will be adjusted accordingly. Ringed and bearded seals are already included as Special Status Species, so, if the determination lists them as threatened, further analysis will not be needed. Climate change impacts on Special Status Species (bearded and ringed seals) are discussed in Chapter 3, Special Status Species, Marine Mammals. The potentially compounding effects of climate change are included under each alternative in the cumulative effects section of Chapter 4.

Specific to greenhouse gas emission, BLM is analyzing the impacts of greenhouse gas emissions (including carbon dioxide) from oil and gas exploration and drilling in the NPR-A as part of our air quality analysis. Under all Alternatives, oil and gas development on the North Slope would generate greenhouse gas emissions, although the quantity is considered miniscule in the global context. Please refer to Chapter 4, Alternative A, Oil and Gas Exploration and Development Activities, Air Pollution Emission Sources and to Chapter 3, Physical Environment, Climate Change on the North Slope for further information.

Environmental impacts of greenhouse gas emissions from oil and gas consumption are not effects of the NPR-A IAP/EIS as defined by the Council on Environmental Quality, and thus are not required to be analyzed under NEPA. Greenhouse gas emissions from consuming NPR-A oil and gas are not direct effects under NEPA since they do not occur at the same time and place as the action, nor are they indirect effects because NPR-A oil and gas leasing and production would not be a proximate cause of greenhouse gas emissions resulting from consumption. Also, because the impacts of consumption are not direct or indirect effects of the proposed actions under the NPR-A IAP/EIS, a cumulative impact analysis would not show incremental effects attributable to leasing options under the proposed alternatives. The Energy Information Administration reported emissions from various petroleum products (e.g., aviation gasoline, motor gasoline, etc.), natural gas and other gaseous fuels (e.g., methane, landfill gas, etc.), electricity, coal, and renewable sources, yet translating this into emissions from the ultimate consumption of the oil and gas produced from the NPR-A would be a highly speculative exercise. Equally speculative at this time, would be attempting to link current or to forecast future climate change effects

(primarily loss of sea ice habitat) on ice seals and greenhouse gas emissions generated by proposed NPR-A activities.

[Response to 24.028]
Additional analysis was not conducted because although Pacific walrus are facing a number of threats, quantitative ways in which to analyze their impacts are generally lacking. However, the IAP/EIS recognizes that walrus threats are apparently currently dynamic, and that future combinations of threats could become significant for walrus. Potential threats to walrus from the activities proposed in the IAP/EIS were greatly minimized in two ways: 1) several alternatives proposed additional and/or larger Special Areas on the Chukchi coast to provide more protected marine mammal habitat, and 2) the mitigation measures proposed specifically for walrus (and adopted in the preferred alternative) should protect the species from most potential disturbances or habitat impacts from the activities that are under consideration in the IAP/EIS.

[Response to 24.029]
Providing "permanent" protection, such as through creation of Wilderness Areas or designation as a Wildlife Refuge, is not consistent with the purposes and need of the plan or with current law and regulation. See discussions "Alternatives Considered But Eliminated from Detailed Analysis" in Chapter 2. However, the IAP/EIS does consider new or enlarger coastal Special Areas that would provide additional protection for known Pacific walrus haulout areas along the NPR-A Chukchi coastline, including Kasegaluk Lagoon. In addition, limits to coastal infrastructure development and new mitigation measures have been proposed specifically to protect walrus from disturbance when they are using NPR-A coastlines and barrier islands.

Additionally, a cap on greenhouse gas emissions is not within the scope of this planning effort.

[Response to 24.030]
Additional and updated information was added to Chapter 3, Special Status Species, Marine Mammals and to Chapter 4, Cumulative Effects, Special Status Species. Information was added to the cumulative effects section for ringed seals as a past/present effect, not as an effect linked to proposed NPR-A activities. The disease has not been identified, nor have the causal agents. Research, including looking at possible environmental factors, is ongoing. It is premature and inappropriate to ascribe any cause to the disease outbreak, including oil and gas development. Although it is of concern, the level of mortality, thus far, is not high enough to cause adverse population impacts. Making such a determination is not possible.

[Response to 24.031]
Updated information provided by NOAA in 2012 on the UME was added to the ringed seal sections of Chapter 3 (Affected Environment), Special Status Species, Marine Mammals and Chapter 4, Cumulative Effects, Special Status Species. The disease has not yet been identified, despite extensive testing, and the mechanisms and underlying causes are unknown, as is the total level of impact.

[Response to 24.032]
The alternatives considered in the IAP/EIS include the full range consistent with law and regulation. An alternative that would not support an "expeditious program of competitive leasing of oil and gas," which is required in the NPRPA, as amended, would not be consistent with the purpose and need of the plan. See sections 1.1 and 1.5.

[Response to 24.033]
The alternatives considered in the IAP/EIS include the full range consistent with law and regulation. An alternative that would prohibit leasing until a national plan to reduce greenhouse gas emissions by 80 percent has been established would not be consistent with the legislative mandate in the NPRPA to conduct an "expeditious program of competitive leasing of oil and gas."

[Response to 24.034]
The "no action" alternative is properly established in the IAP/EIS as no change in the current management of the NPR-A. An alternative that would provide for no leasing and no commercial oil and gas development would not be consistent with the NPRPA or the purpose and need of the plan. See sections 1.1 and 1.5.

[Response to 24.035]
The "No Action" alternative is properly established in the IAP/EIS as no change in the current management of the NPR-A. An alternative that would provide for no leasing and no commercial oil and gas development would not be consistent with the NPRPA or the purpose and need of the plan. See sections 1.1 and 1.5.

[Response to 24.036]
The BLM has considered recommendations for Wild and Scenic River designation. It has not considered in detail alternatives that would recommend Wilderness designation or recommendations for establishment of a Fish and Wildlife Refuge, both of which would provide "permanent protection." See section 2.4 for a discussion.

[Response to 24.037]
See cumulative impact analysis section 4.8.7.8 for information on impacts to birds from marine seismic, development and production activities. There is no wintering habitat for loons or eiders in the Beaufort or Chukchi seas in the areas of the Shell leases. There is significant use of those lease areas by eiders and loons during spring and fall migration and staging periods. The IAP/EIS acknowledges that this use will increase the cumulative effects to those species.

[Response to 24.038]
Please see the discussion of "Factors Outside of the North Slope" in the analysis of cumulative impacts to birds in volume 3 for an overview of threats to species in wintering grounds. See individual bird species accounts in Chapter 3 for brief discussions on specific threats to those species on their wintering grounds.

COMMUNICATION NUMBER 25
Brian O'Donnell, Executive Director
Conservation Lands Foundation

Dear Jim Ducker, BLM Alaska State Office:

The Conservation Lands Foundation is pleased to be able to comment on the Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve-Alaska (NPRA). This unique ecosystem, the largest tract of land administered by the Bureau of Land Management, deserves our best efforts to find a balanced approach that allows for responsible oil and gas exploration and development in appropriate areas while permanently protecting the most significant natural resources and wildlife habitat.

Alternative B comes closest to achieving this balance, as it recognizes the long-standing and bipartisan efforts to protect the most sensitive areas of the ecosystem, including Teshekpuk Lake and the Utukok Highlands, and it seeks to promote energy exploration and development while limiting environmental impats. That said, there are significant areas of concern that we have identified with that alternative where we believe improvements need to be made. These concerns and our corresponding recommendations are listed below.

1. Construction of permanent gravel roads.

[25.001] Each of the four alternatives presupposes the construction of permanent gravel roads into the NPR-A. **[Preamble 25.002, 003]** We strongly question why the opportunities for roadless development was not adequately considered. In order to have a true full range of alternatives this scenario needs to be evaluated. Industry has already demonstrated technology to use helicopters, ice roads or other less invasive infrastructure. This approach needs to be fully considered in the planning process.

The environmental impact of roads on the surrounding landscape has been extensively studied. Roads have a myriad of negative environmental impacts, including the alteration of drainage patterns and the increased salinity of the surrounding soil which changes the plant communities that are able to grow. Historically the establishment of a road for one purpose opens the door for other uses and the need for further expansion of roads.

[25.002] Additionally there are numerous studies highlighting the negative impact of permanent roads, including gravel roads, on wildlife, especially large, migratory mammals. The Western Arctic Caribou Herd and the Teshekpuk Caribou Herd together number over 400,000 animals and would be susceptible to such impacts. Permanent gravel roads in the area would likely have a dramatic impact, such as changing the traditional caribou migratory pathways and changing foraging habits. Given the complexity of the animals' response to roads, the creation of new roadways may have negative consequences that have not even been considered at this point. The authors of the study below note how the caribous' interaction with a roadway is difficult to predict, and is often dependent on many outside factors.

R.D. Cameron and Alaskan biologist Jim Dau concluded in "The Effects of a Road System on Caribou Distribution During Calving" (Rangifer 1986), that caribou react to roads differently depending on the time of year, whether or not they are accompanied by a newborn calf, and whether there is the presence of other sources of disturbance, such as insects of traffic. Changes in foraging and how animals responded to roads, especially during calving, were observed. The authors state that "maternal cows avoided roads even when there was little traffic during calving, while bulls and non-maternal cows showed little avoidance." This can have the effect of causing wide separations in the herd.

A 2004 study by Lenore Fahrig and Tina Rytwinski in "Ecology and Society" notes that animals with large distribution ranges, like the caribou, are especially negatively impacted by permanent roadways because of disruption of their traditional migratory pathways.

[25.003] Plant life is also negatively affected by gravel roads, primarily by the dust. In one of the first studies of its kind, University of Colorado and Ohio State researchers D.A. Walker and K.R. Everett published their findings in the journal "Arctic and Alpine Research (volume 19, No.4). They concluded that dust from gravel roads changed snowmelt patterns in the vicinity of the roadway, increased the depth of tundra thaw in the area, and caused a decrease in soil lichens and sphagnum mosses, a vital component of the caribou diet.

We believe that oil drilling can proceed in the region in ways that do not create a permanent road infrastructure. At a minimum, the IAP/EIS should stipulate that all other less invasive alternatives, including ice roads, extended reach drilling, and helicopter transport, should be considered as alternatives to a permanent roadway.

2. Designated Special Areas

[25.004] There are four areas within the NPR-A that have long been designated as "special areas": the Teshekpuk Lake area vital to nesting and molting waterfowl; the Utukok River highland region, home territory of the Western Arctic caribou herd, the Coleville River area, providing habitat to the Arctic Peregrine falcon; and the vital marine mammal habitat of the Kasegaluk Lagoon. In a bipartisan fashion, these areas have been consistently regarded as deserving meaningful protections by each administration over the past three decades.

The proposed IAP/EIS also refers to these regions as "special areas." Our concern is that this designation as a "special area" in actuality does not offer an significant protection. In fact, there would be nothing to prohibit a future administration from opening these regions to oil and gas drilling and permanent road construction.

We encourage the Bureau of Land Management to publically outline specific objectives for the management of these critical areas and to institute management practices that would ensure that these globally vital areas receive the maximum protection possible. It's paramount that we enact management practices that honor the long-standing and bipartisan desires for these unique and naturally significant areas to receive the protections they deserve.

Oil drilling and associated infrastructure will permanently impact the NPR-A. The "special areas" which are in some ways set aside to mitigate the impacts of drilling and ensure protection of important natural resources have no permanent status. Before allowing permanent impacts to the NPR-A, the BLM should develop stronger and more lasting protections for the "special areas."

3. Offshore development

[25.005] Similar to our concern that the proposed IAP/EIS seems to convey the message that permanent gravel roads and other high impact infrastructure will inevitably be in the NPR-A's future, each of the draft alternatives seem to presuppose offshore oil and gas development. the issue of offshore oil drilling is outside the scope of this analysis and management plan, and it is inappropriate to case judgment or make assumptions about future decisions and development in that arena.

If oil drilling commences in the Chukchi Sea, alternatives including an undersea pipeline to Prudhoe Bay should be carefully studied and considered before assuming that the only way to transport the oil from offshore to Prudhoe Bay would be via an overland pipeline through the NPR-A.

The issue is even more striking in the context of recent geological studies that significantly revised and lowered the hydrocarbon potential in the NPR-A. The October 2010 report by the U.S. Geological Survey, combined with extensive 3-D seismic studies and more than 30 exploration wells, indicate that oil reserves in this region are far less abundant than originally believed when the land was set aside as a Naval Petroleum Reserve in 1923.

In Summary, the Conservation Lands Foundation believes that Alternative B in the proposed IAP/EIS comes closest to finding the critical balance needed between energy development and

conservation although there are major outstanding questions and improvements needed. We strongly oppose Alternative D which would have the most detrimental impact on the environment and wildlife while only providing our nation enough oil to supply our needs for a couple of weeks.

Thanks for your consideration,

Brian O'Donnell
Executive Director
Conservation Lands Foundation

[Response to 25.001]
The IAP/EIS anticipates that techniques that minimize impacts to the tundra will be used in development in NPR-A. See the discussion on winter ice roads, snow-packed trails, and alternate transportation systems, such as marine barging and/or airstrips for year-round access in Chapter 4, Section title "Oil and Gas Exploration and Development Activities."

The plan analysis also assumes that future activities in the NPR-A would follow the example of development at the Alpine field which includes roads linking its central processing facility, most satellite production pads, and an airstrip. Consistent with this assumption and the recent decision by the Corp of Engineers to authorize a road bridge to connect the CD-5 Alpine satellite pad with the Alpine central processing facility pad, the IAP/EIS assumes such a road would be built. Development of as yet undiscovered oil and gas resources are assumed to have minimal gravel infrastructure. Moreover, Required Operating Procedure/Best Management Practice E-5 mandates that the development footprint be minimized. Note, however, one of the purposes of this plan is to provide the opportunity to construct necessary infrastructure to support bringing oil and gas resources from the Chukchi Sea to the Trans-Alaska Pipeline System and/or a future gas pipeline. This infrastructure may require a road that would link NPR-A to the Dalton Highway area.

[Response to 25.002]
See the first response to the Conservation Lands Foundation letter for a discussion of the appropriateness of considering the use of roads in NPR-A. The potential impacts of roads on caribou are considered in the analysis in the IAP/EIS.

[Response to 25.003]
See the first response to the Conservation Lands Foundation letter for a discussion of the appropriateness of considering the use of roads in NPR-A. All of the noted effects of dust are described in the IAP/EIS analyses.

[Response to 25.004]
The NPR-A IAP/EIS provides broad objectives for the Special Areas. In addition, it provides more specific objectives and requirements/standards for areas within Special Areas with particular value to resources. See the K series of stipulations and required operating procedures/best management practices.

[Response to 25.005]
The IAP/EIS makes no decisions regarding Chukchi Sea development. If an application for development is received, the BLM along with other permitting agencies will address a reasonable range of alternatives regarding the location and major components of the infrastructure. The IAP/EIS appropriately discusses the potential cumulative impacts of offshore development, including the potential for that development to include onshore infrastructure in NPR-A.

COMMUNICATION NUMBER 26
Pamela Miller, Arctic Program Director
Northern Alaska Environmental Center

Mr. Bud Cribley, BLM State Director
NPR-A IAP/EIS Comments
c/o AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508
via BLM webform
Cc: jducker@blm.gov

RE: Comments on draft National Petroleum Reserve-Alaska Integrated Activity Plan/ Environmental Impact Statement

Dear Mr. Cribley:

On behalf of the Northern Alaska Environmental Center and our members, we thank you for this opportunity to provide scoping comments in response to your public notices [1] on the draft Integrated Activity Plan and Environmental Impact Statement (draft Plan) for the National Petroleum Reserve-Alaska (Reserve).

This letter expands upon our comments at the Fairbanks and Anchorage hearings, and augments the group technical letter that The Wilderness Society submitted on our behalf today.

The Northern Center is a regional grassroots non-profit organization based in Fairbanks with over 1,500 members most of whom live in Alaska. Since 1971, we have has promoted conservation of the environment and sustainable resource stewardship in Interior and Arctic Alaska through education and advocacy. Our organization has had a longstanding interest in the Reserve involving review of oil and gas activities, studies, plans, and environmental assessments, and conservation initiatives. Many of our members have great familiarity with this area as scientists, wilderness guides, subsistence users, birdwatchers, hunters, fishermen, dogsledders, rafters, kayakers and canoeists, snowmachiners, pilots, photographers, among those who have experienced and traveled the area. Many members and other residents spoke at the public hearing Fairbanks and will write more eloquently than we do here about these remarkable wildlands, wetlands, rivers and coasts still largely intact with ancient trails of animals and people still so vital to northern Alaskans today and flyways that connect this place to millions of Americans.

We appreciate BLM's ambitious planning effort for the entire National Petroleum Reserve-Alaska (Reserve) that is the first to encompass management for the full range of values -- including wildlife habitats, subsistence, wild rivers, wilderness characteristics, and recreation - across this broad swath of public lands in the Western Arctic.

As we consider the draft NPR-A Integrated Activity Plan/ Environmental Impact Statement (hereafter, "Draft Plan," we recognize that further oil and gas exploration and development will occur in some places in the Reserve, and find that a balanced approach is needed for the management that protects the most ecologically sensitive and culturally vital areas.

Today, there already exist more than 1.4 million acres of the Reserve under active lease and nearly 3 million acres in active State of Alaska leases on their lands between the Colville and Canning Rivers including dozens of oil fields around Prudhoe Bay (see Attachment - Map, Oil and Gas Leasing on Alaska's North Slope).

The ecological integrity of the North Slope is at serious risk from unplanned, piecemeal and damaging development. The most biologically rich and well known wildlife and wilderness values of the Reserve are not permanently protected. This lack of enduring conservation commitments that achieve maximum protection for special areas, also reduces our opportunity

to establish ecological baselines from which we can evaluate long-term impacts from expanding industrial infrastructure and separate these from other environmental effects like climate change.

We urge BLM to select Alternative B, for balance, as the preferred alternative for the final Plan. It is the only alternative that provides effective and reliable conservation measures to protect fish, wildlife and their habitats to ensure balanced management of the NPR-A, consistent with federal law. This alternative provides for 11 million acres for oil and gas leasing and development in other parts of the Reserve not within the existing and proposed Special Areas.

Alternative B is the only one in the Draft Plan that protects the Teshekpuk Lake Special Area from oil and gas leasing and development by making this area unavailable for leasing [2]. Alternative B also provides meaningful protections for the expanded Teshekpuk Lake Special area to encompass also the key wetlands Dease Inlet wetlands, expanded Utukok River Uplands Special Area which includes vital habitats in the DeLong Mountains and foothills, the Upper Colville River Special Area, and the coastal areas of Kasegaluk Lagoon and the new Peard Bay Special Areas. The protections include making most of these Special Areas unavailable for leasing, along with vital protections from permanent oil and gas infrastructure.

All of the other Alternatives are not balanced. Alt. C is a repeat of the Bush Administration's plan in the No Action Alternative A with respect to leasing in the Teshekpuk Lake Special Area and across the northern Reserve with respect to the areas that would be dedicated to oil and gas leasing. Once the hard-won deferral ends, all of the Teshekpuk Lake wetlands critical to brant and other geese, migratory birds, and caribou calving and insect relief would be opened to leasing and development. The Teshekpuk Lake wetlands are among the most important in the entire Arctic. There is no new science that would justify this decision, and the complicated leasing plan – the same as was put forward by the Bush Administration and will expire at the end of the leasing deferral in 2018 -- will only result in the fragmentation and degradation of critical wildlife habitats.

Looking across the rest of the Reserve, Alternative C's provisions are not even "moderate" as they would open to leasing and development most of the existing Utukok River Uplands Special Area including the most concentrated calving habitat for the Western Arctic Caribou Herd – the very values for which it was dedicated as an Special Area and deserving maximum protection as Congress set out by law. A broad approach to managing critical habitats for caribou is needed due to the requirements for large range areas. As the NPR-A Task Force (1978) noted:

"Caribou survive best where they can wander unhindered over a large range. Particularly important to survival of caribou is an untrammeled area such as the Utukok River uplands where snow cover is minimal in the early spring. Here caribou can utilize the exposed forage which is a source of energy needed for calving." [3]

There should be no leasing of oil and gas or coal bed methane or permanent infrastructure, including roads and pipelines, within the primary calving and insect relief habitats and migration routes of the Western Arctic and Teshekpuk Lake caribou herds. **[26.001] The area used by caribou over the long-term, not just since radio-collaring of animals, should be included, as well as considerations for more expansive areas that may be necessary due to climate change.** We are especially concerned about Alternative C's proposal to open even the most biologically significant areas with the recommend, and Alt. D's plan to allow oil and gas leasing throughout the entire South planning. This would be a huge change that instead of providing precautionary management for this area -- both distant from the existing oil and gas field industrial complex and low in oil and gas potential – it would contravene the mandates for maximum protection of special areas.

Furthermore, road or pipeline corridors to a port on the Chukchi Sea coast would cut across seasonal caribou migration routes, impeding access to insect-relief areas and movements between calving and wintering areas.

We support Alternative B's nomination of 12 Wild and Scenic Rivers: **[Preamble 26.002]** The Upper Colville River, the Nigu, Etivluk, Ipnavik, Kuna, Kiligwa, Nuka, Awuna, Kokolik, and Utukok rivers and Driftwood and Carbon Creeks because they are the wildest rivers in the Reserve, provide great wild lands recreational experiences due to their remoteness and naturalness, and because of the vitality of these river corridors to the broader ecosystem supporting the Western Arctic Caribou herd, and bears, wolves, and wolverines. It is also a tool to better protect subsistence resources. **[26.002]** While most of these rivers are already known by their Inupiat names, we suggest that those original names be restored to the rest. Later in this letter we provide more information about outstandingly remarkable values of these rivers for wildlife, recreation, wilderness, scenery, and culture and why they warrant recommendation in the final plan as Wild Rivers. This would be an important designation, in addition to the priority allocation of Special Area lands to be unavailable for leasing in Alternative B.

We are encouraged by Alternative B as a means that can best provide effective protection for the nationally and internationally recognized wildlife habitats, wild rivers, cultural resources and wilderness found in the Reserve. A balanced approach in the Reserve, by definition, means an approach that gives equal consideration to all values not just resource development values. To date the BLM has failed dramatically to fulfill its multiple use mandate and statutory requirements to provide maximum protection and prevent undue degradation to the important ecological and cultural resources of the Reserve. We are encouraged that this NPR-A wide plan can shift the balance within the Reserve to provide stronger protection for surface values and provide the basis for enduring protection for significant special areas.

Healthy, productive ecosystems are fundamental for ensuring a sustainable economy for Alaska and maintaining the quality of our life style shared and valued by all Alaskans. Since the Arctic is on the frontline of global warming impacts, there is special urgency for reducing greenhouse gas emissions by developing substantial renewable energy sources and efficiency and making the transition from developing and burning fossil fuels.

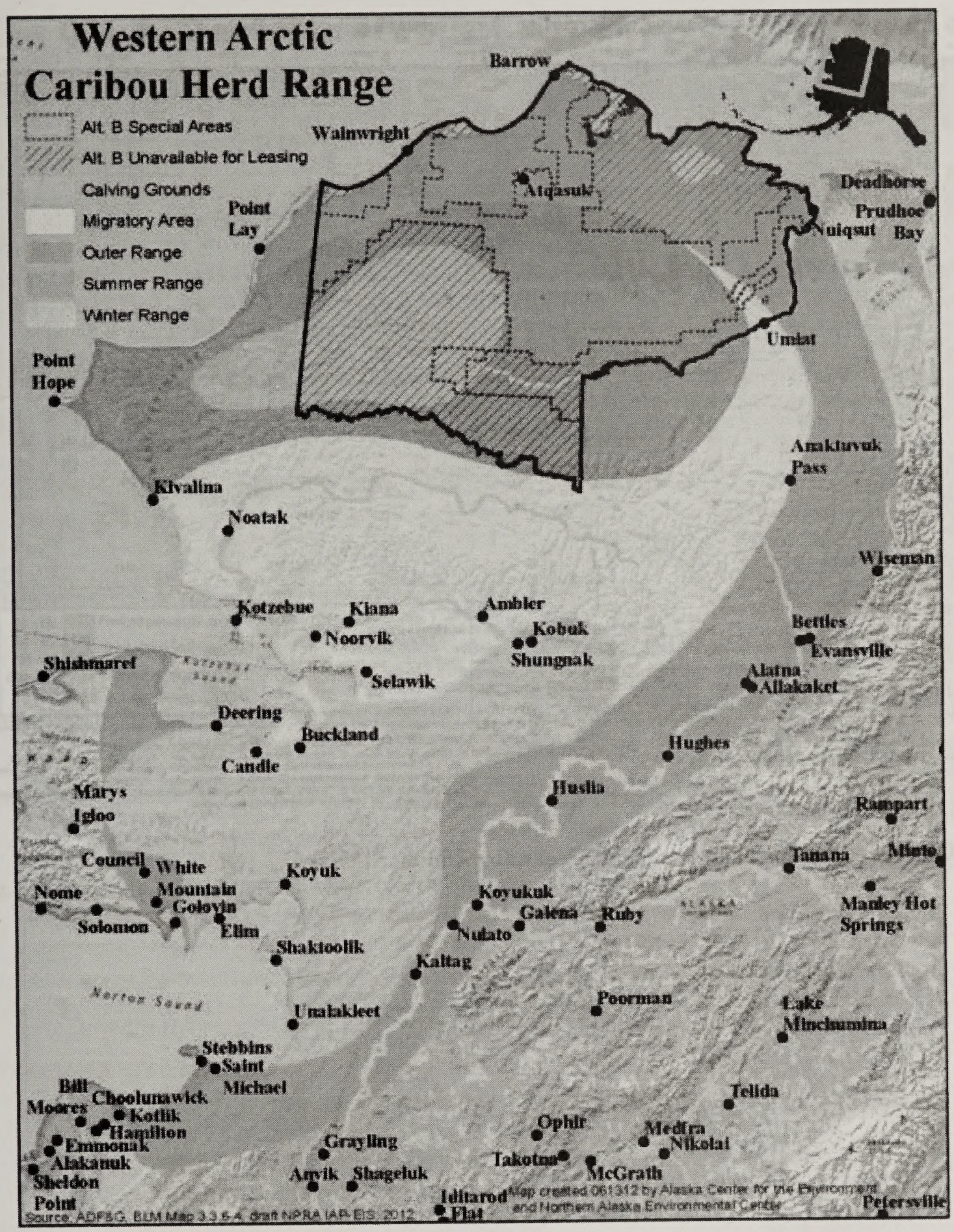
We look forward to playing an active role in the planning process, and encourage you to contact us.

Sincerely,

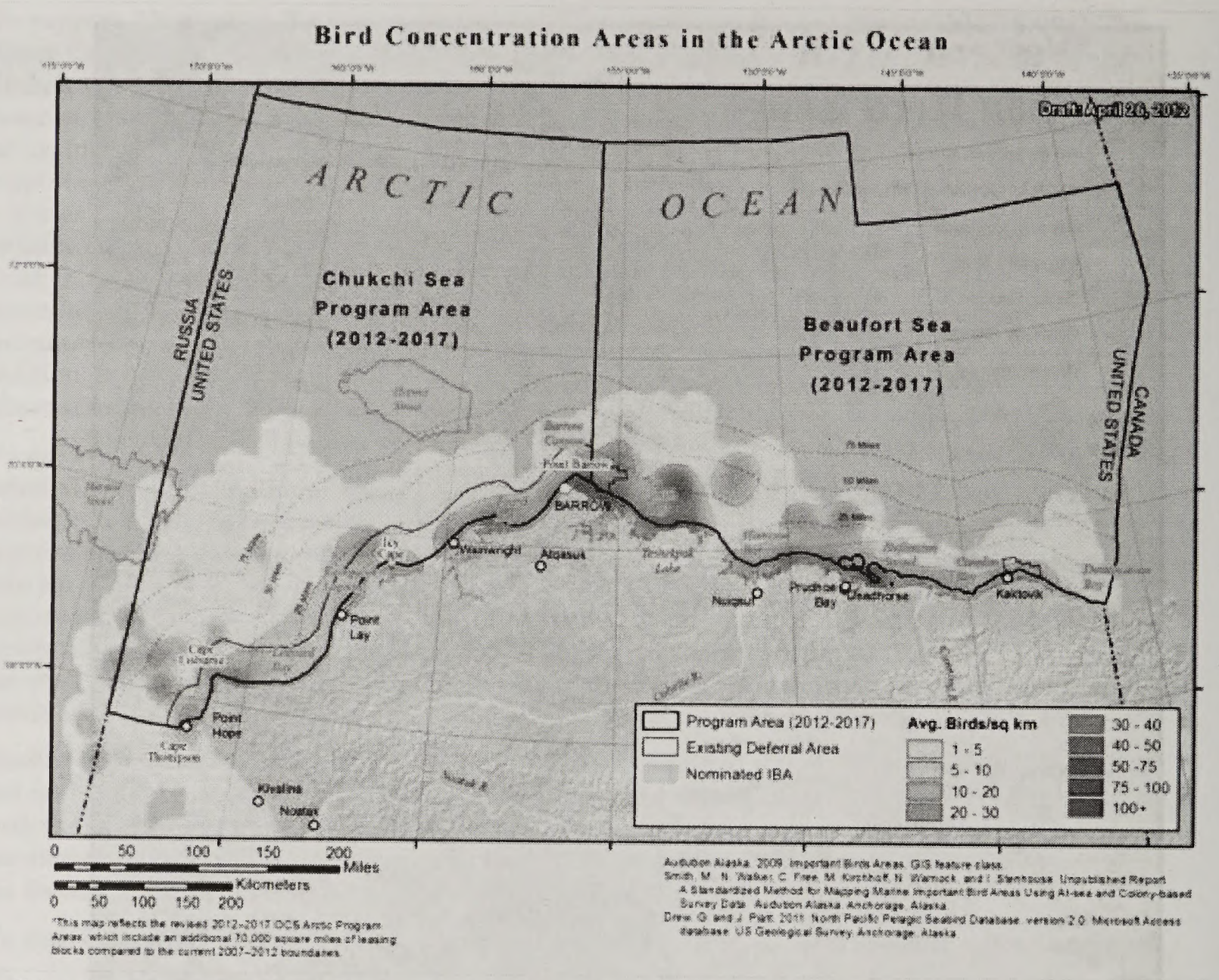
Pamela A. Miller
Arctic Program Director

Attachments:

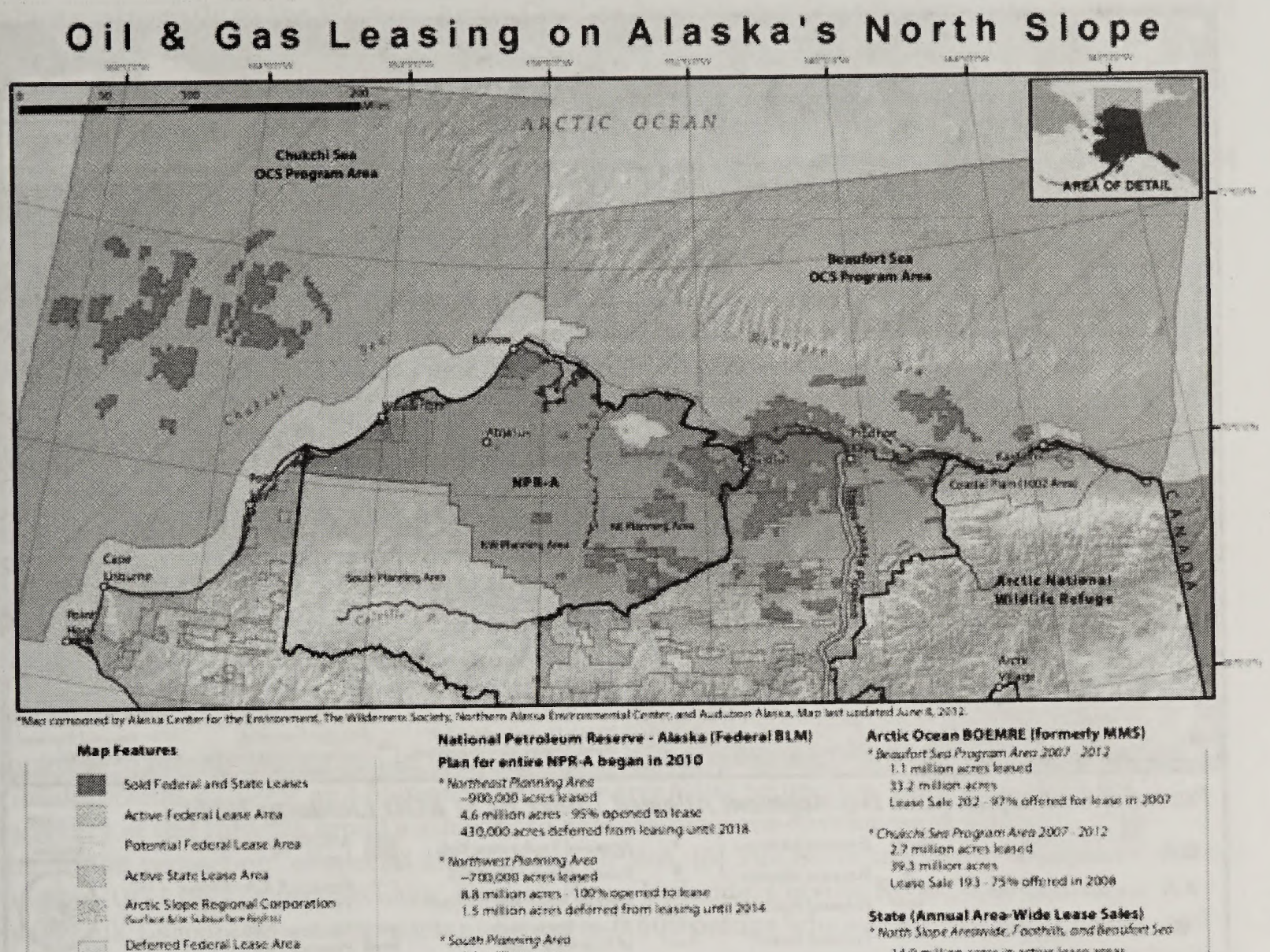
I. Wild and Scenic River Review – Detailed analysis and descriptions of additional values to support recommendations as set out in Alternative B
II. Map Appendix:



a. Western Arctic Caribou Herd Range

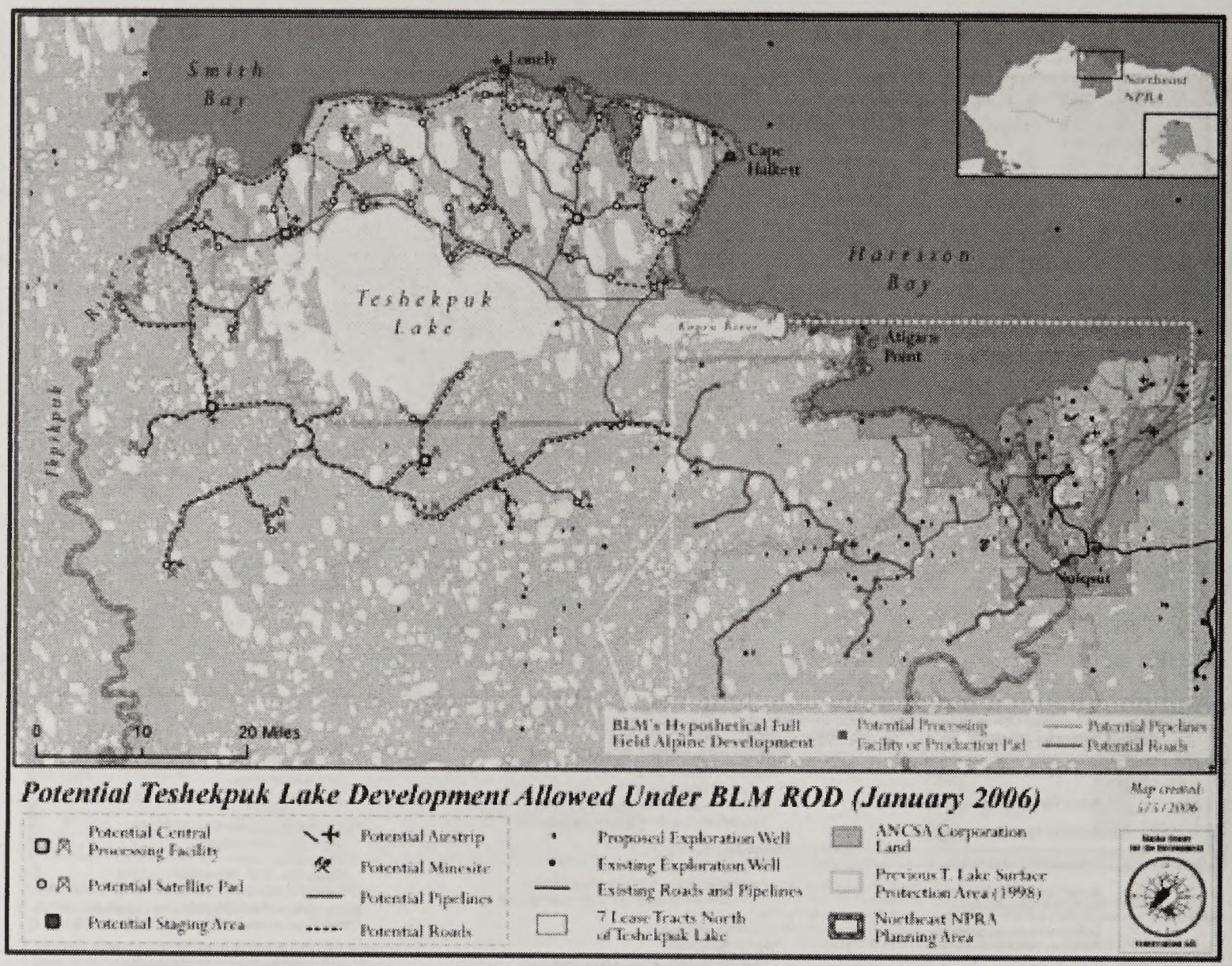

Bird Concentration Areas in the Arctic Ocean
Draft: April 26, 2012
ARCTIC OCEAN
RUSSIA
UNITED STATES
Chukchi Sea
Program Area
(2012-2017)
Beaufort Sea
Program Area
(2012-2017)
CANADA
UNITED STATES
Point Barrow
BARROW
Wainwright
Atqasuk
Nuiqsut
Prudhoe Bay
Deadhorse
Kaktovik
Point Lay
Point Hope
Cape Thompson
Kivalina
Noatak
Program Area (2012-2017)
Existing Deferral Area
Nominated IBA
Avg. Birds/sq km
1 - 5
5 - 10
10 - 20
20 - 30
30 - 40
40 - 50
50 -75
75 - 100
100+
0 50 100 150 200 Miles
0 50 100 150 200 Kilometers
*This map reflects the revised 2012-2017 OCS Arctic Program Areas which include an additional 10,000 square miles of leasing blocks compared to the current 2007-2012 boundaries.
Audubon Alaska. 2009. Important Birds Areas. GIS feature class.
Smith, M., N. Walker, C. Free, M. Kersbrook, N. Warnock, and I. Stenhouse. Unpublished Report. A Standardized Method for Mapping Marine Important Bird Areas Using At-sea and Colony-based Survey Data. Audubon Alaska. Anchorage, Alaska.
Drew, G. and J. Piatt. 2011. North Pacific Pelagic Seabird Database, version 2.0. Microsoft Access database. US Geological Survey. Anchorage, Alaska.

b. Bird Concentration Areas in the Arctic Ocean (by Audubon Alaska


Oil & Gas Leasing on Alaska's North Slope
ARCTIC OCEAN
Chukchi Sea
OCS Program Area
Beaufort Sea
OCS Program Area
AREA OF DETAIL
NPR-A
Barrow
Atqasuk
Wainwright
Nuiqsut
Kaktovik
Arctic Village
Cape Lisburne
Point Hope
South Planning Area
Arctic National
Wildlife Refuge
CANADA
Map Features
Solid Federal and State Leases
Active Federal Lease Area
Potential Federal Lease Area
Active State Lease Area
Arctic Slope Regional Corporation
Deferred Federal Lease Area
Barrow Native Lands
National Petroleum Reserve - Alaska (Federal BLM)
Plan for entire NPR-A began in 2010
* Northeast Planning Area
~900,000 acres leased
4.6 million acres - 95% opened to lease
430,000 acres deferred from leasing until 2018
* Northwest Planning Area
~700,000 acres leased
8.8 million acres - 100% opened to lease
1.5 million acres deferred from leasing until 2014
* South Planning Area
9.2 million acres
Scoping in 2006, process discontinued
Arctic Ocean BOEMRE (formerly MMS)
* Beaufort Sea Program Area 2007 - 2012
1.1 million acres leased
33.2 million acres
Lease Sale 202 - 92% offered for lease in 2007
* Chukchi Sea Program Area 2007 - 2012
2.7 million acres leased
39.3 million acres
Lease Sale 193 - 75% offered in 2008
State (Annual Area-Wide Lease Sales)
* North Slope Areawide, Foothills, and Beaufort Sea
14.0 million acres in active lease areas
3.9 million acres in existing leases

*Map compiled by Alaska Center for the Environment, The Wilderness Society, Northern Alaska Environmental Center, and Audubon Alaska. Map last updated June 8, 2012.

c. Oil and Gas Leasing on Alaska's North Slope



d. Potential Teshekpuk Lake Development Allowed Under BLM ROD (January 2006)

DETAILED COMMENTS

These comments are organized in three major areas, and supplement those raised in our group technical letter submitted on our behalf by The Wilderness Society:

I. Review of some major sections of the Draft Plan

II. Inadequate description of oil and gas exploration and development infrastructure and activities

III. Wild and Scenic River Review – Detailed analysis and descriptions of additional values to support recommendations as set out in Alternative B

IV. Map Appendix:
a. Western Arctic Caribou Herd Range
b. Bird Concentration Areas in the Arctic Ocean (by Audubon Alaska)
c. Oil and Gas Leasing on Alaska's North Slope
d. Potential Teshekpuk Lake Development Allowed Under BLM ROD (January 2006)

I. Review of Major sections of the Draft Plan

Coal and Hardrock Mining -- Given that the Arctic is on the frontline of global warming impacts, we support BLM's decision to keep the existing prohibitions under law for hardrock mining and coal, and to keep these outside the scope of the EIS. Not only would coal provide a new source of greenhouse gases from the most polluting fossil fuel that already is harming this landscape but the cumulative impacts of extraction and road corridors pose unacceptable

impacts, especially to the Western Arctic Caribou herd's habitats and migrations, as we noted in our scoping comments (please incorporate that letter by reference).

It is critical that the Reserve remain withdrawn from coal and hardrock mining, as these would pose major impacts to the Western Arctic herd. Strip mining of coal and other industrial infrastructure such as roads, railroads, powerlines, and oil and gas infrastructure would disrupt Western Arctic Caribou Herd calving habitat and push caribou into suboptimal habitat where over-crowding may reduce food sources and nutrition and lower calving rates.

Alternatives

Not since Congressionally mandated studies in the 1970's [4] has BLM identified a range of special values for this entire area and considered alternatives to provide management regimes that designate additional Special Areas and enlarge the size and purposes of existing ones, better protect surface resources by designating areas as unavailable for leasing along with prohibitions of permanent infrastructure.

The public hearing presentation was biased in favor of oil and gas leasing. It also failed to describe the important values of each Special Area, to describe the conservation value of areas designated as Unavailable for leasing, and to clearly explain the proposals compared with the existing situation. We urge that BLM provide a clear summary of the Final Plan for the essential government-to-government consultation and when it is released to the public.

Special Areas

Congress expressly recognized in the law that the Reserve has exceptional natural, fish and wildlife, scenic, cultural and historical values warranting protection. Congress provided the Secretary of the Interior broad authority to balance resource development activities with "maximum protection" of special areas in the NPR-A. [5] The Secretary designated three Special Areas in 1977,[6] Teshekpuk Lake, Utukok River Uplands, Colville River, and in 2004, Kasegaluk Lagoon, an area important for up to 3,500 beluga whales, spotted seals, birds, and fish along the Chukchi Sea coast.

Alt. B of this plan rightly would expand two of the existing special areas: Teshekpuk Lake to include vital calving and insect-relief habitat for the Teshekpuk Lake caribou herd and to encompass additional wetlands including along Dease Inlet that are necessary to adequately protect globally significant nesting, feeding, staging habitats for millions of migratory birds. The Utukok River Uplands Special Area to encompass additional significant habitats for the WACH including insect-relief and migration routes in the DeLong Mountains / Arctic Foothills. These remote, intact ecosystems are also important habitats for brown bears, wolves and wolverines. The new Peard Bay Special Area would protect key shorebird and waterfowl habitats and polar bear denning area.

The Plan should provide full characterization of the important values for lands in the existing, enlarged, and new Special Areas. The Plan proposes to expand the purposes for some of the Special Area designations, but all of them should be expanded. See additional descriptions in our technical group letter submitted on our behalf by The Wilderness Society today.

Designating Key Areas as Unavailable for Leasing

The designation of lands as Unavailable for Leasing and its accompanying provisions is an essential component of Alternative B that should be in the final Plan in order to adequately provide maximum protection to Special Areas in the Reserve. As defined, the term is not as strict as the prior definitions for the no leasing lands with the Teshekpuk Lake Surface Protection Area in the 1999 Northeast Area ROD.

[26.003] BLM provides these definitions for the Unavailable land allocation: "Unavailable and no exploratory drilling or non-subsistence permanent infrastructure (including for potential offshore oil and gas development) except where valid existing NPR-A leases and Wainwright Inlet/Kuk River subsurface pipeline. Unavailable areas include the coastal waterbodies' islands

and 1-mile inlands from Kasegaluk Lagoon and Peard Bay." (See Map 2-2 Alt. B) Definition for permanent oil and gas facility (DEIS, Vol. 4, Glossary, p. 115-116): "Production facilities, pipelines, roads, airstrips, production pads, docks, seawater treatment plants, and other structures associated with oil and gas production that occupy lands for more than one winter season. Material sites and seasonal facilities, such as ice roads, are excluded, even when the pads are designed for use in successive winters."

Other activity needs to be clearly added to the prohibited activities:
- Seismic exploration
- Gravel mines – should be on list of permanent oil and gas facilities
- Permanent pads, roads or other gravel fill to support exploratory activities.
- Zero discharge of oil and gas wastewaters into these areas.

Infrastructure and associated industrial activities from drilling and production pads, roads, pipelines, staging or support bases, and docks pose negative impacts to fish and wildlife from direct and cumulative habitat loss, disturbance from noisy operations, and increase risks of oil spills and contamination, as the National Research Council's cumulative effects study in 2003 documented

Special Risks of Pipelines in Coastal Bays, Lagoons, and Shorelines - The environmental impacts of pipeline construction, operations, and potential spills are of particular concern in coastal areas and shorelines which are highly productive habitats and therefore it is warranted that such facilities be excluded from the Kasegaluk Lagoon and Peard Bay Special Areas that are Unavailable for leasing.

There are a range of environmental hazards in lagoon, coastal and shoreline areas of the Chukchi and Beaufort Seas due to soil, silt, and permafrost characteristics, subsidence, strudel scour where rivers flow into bays and nearshore waters, ice ride up, and coastal erosion. Transition zones for pipelines, such as where ocean or lagoons meet the shoreline, are prone to higher risks to pipeline integrity from buckling or bending, settlement, and thaw strain, and other factors. [7] This can be due to uneven freezing and thawing of permafrost resulting in differential thaw settlement, soils having higher rates of settlement, frost heave, local thaw bulb creation, associated subsidence and instability, seawater incursion. Many of these factors can increase rates of shoreline erosion. These factors, in turn can increase risks of spills and environmental damage.

Spills from buried pipelines in these lagoons and bay would flow directly into sensitive estuaries such as Kasegaluk Lagoon or Peard Bay Special Areas and nearshore waters of special significance such as the Chukchi Polynya that is a vital migratory pathway for birds, whale and other marine mammals, and fish as well as essential area for customary and traditional Inpuiat lifeways. Spills from pipelines located onshore could also enter these productive areas quite quickly.

A few examples highlight this impact. Southwest of New Orleans, a Texaco pipeline bringing oil from 50 offshore platforms and buried 8' beneath the saltwater Lake Barre ruptured, spilled 210,000 gallons of crude oil across a 7-mile path. Shallow coastal wetlands where shrimp, crabs, fish, birds and other wildlife breed were oiled. [8] At Sakhalin Island, Russia, an earthquake at 7.5 on the Richter scale ruptured the pipeline from offshore oil fields in the Sea of Okhotsk to mainland terminals in 18 places where it moved and buckled. About 882,000 gallons of crude spilled into the rich fishing areas around the island. The earthquake was a human tragedy as over 2,000 people died, including most of the workers who ran the pipeline.[9]

[26.004] Another aspect of shoreline impacts from pipelines are the electromagnetic fields they generate and these may potentially affect the behavior and migratory patterns of whales, seals, polar bears, other marine mammals, and fish. Similarly, we are concerned about the potential impacts pipeline noise, as well as all the ancillary operations will have on marine mammals and fish in the area.

[26.005] There are also myriad onshore support operations, activities, and infrastructure, as documented by the Northstar offshore oil field development. These also would pose risks of spills, pollution, noise disturbance to the sensitive Kasegaluk Lagoon and Peard Bay Special Areas, and provide further rationale for full protection in these areas allocated as Unavailable from leasing along with the prohibitions of permanent oil and gas facilities (this should be expanded to also include no permanent facilities for any stage of development, including exploration, production and transportation). Here is a short list of some of the facilities and activities involved in the Northstar development:

Pipeline trenching
Pipeline trench excavation tests (to determine technical feasibility)
Pipelines – gas, oil, seawater
Drilling soil borings (to determine soil and permafrost attributes)
Gas offtake facility
Compressor station pad
60 foot high microwave tower on the compressor pad
Central processing facility
Primary freshwater source
Material staging areas
Temporary spoils placement sites
Ice roads
Offshore island construction ice pad
Offshore pipeline construction ice pad
Criss-crossing by proposed, secondary, and potential offshore ice roads between the road from the gravel mine to the pipeline route
Offshore Ice Dump area
Guard Shack
Explosives storage pad
Helicopter landing pad at pipeline landfall
Daily truck travel between this pad and gravel pit with blasting.

Staging areas pose major risks to coastal resources within Special Areas - Staging areas should not be allowed in areas unavailable for leasing, and this should be incorporated into that designation of lands by definition.

Stipulations in Alt. A and C do not provide maximum protection for special areas

The stipulations and Best Management Practices do not provide adequate protective measures within Special Areas to ensure the unique values of the Reserve are sustained for future generations. Furthermore, exceptions are often granted and so the stated measures are not assured. Please incorporate by reference all the prior letters on NPR-A plans since 1995 by the Northern Alaska Environmental Center for additional details regarding their limitiations.

Inadequacy of protection from Stipulations and Best Management Practices

There should be no waivers, exceptions, or modifications of Stipulations or Best Management Practices. While the oil and gas industry and their boosters talk about how great new technology is, in fact they often choose not to deploy it, as our detailed comments in Section II explain.

Wild and Scenic Rivers

See section III, Attached.

Wilderness

We are pleased that BLM has included a wilderness inventory, and appreciate the descriptions of wilderness characteristics contained in the Draft Plan (Vol. 1, pp. 432-436). However, we find it ironic that the prior Northwest NPR-A IAP/FEIS (2003) Plan done during the Bush

Administration actually included an alternative C which considered Wilderness recommendation for Kasagaluk Lagoon and two other areas in its foothills and mountainous reaches, whereas this plan does not. Please see our more detailed comments on wilderness values and recommendations in the group letter submitted on our behalf by The Wilderness Society.

In the section on Affected Environment, the description of Kasegaluk Lagoon's wilderness characteristics, including supplemental values were more comprehensive in the NW NPR-A Plan, although it erred in neglecting to describe cultural values including for subsistence that are fosters by naturalness and solitude which should also be done in this Draft Plan. We recommend that this language from the NW NPR-A Plan be added for the Kasegaluk Lagoon area:

The proposal for two separate National Landmarks, one emphasizing ecological values and the other emphasizing geological values, points up the significance of the area (Detterman, 1978; Koranda and Evans, 1975).

Kasegaluk Lagoon provides unusual primitive recreation opportunities, including recreational boating and sightseeing. In the spring and fall, marine mammals may be seen migrating fairly close to shore. In the late summer, large numbers of shorebirds and waterfowl, including eiders and black brant, may be seen in the area.

The area offers outstanding opportunities for scientific study and education. In a site evaluation report by Steven B. Young (1979) for the Center for the Northern Studies in Wolcott Vermont, the author states:

> The proposal area (Kasegaluk Lagoon) contains the largest lagoon and barrier beach system in the North American Arctic and this complex system displays essentially all of the features and processes associated with this landform, as well as a broad spectrum of the variation inherent in these processes. While no single geological feature can be said to be totally unique to the area, there is probably no place where they are all better displayed. The area is ecologically significant in that it provides an exceptional situation for migrating and breeding waterfowl and other birds. Additional studies of the marine and estuarine animals and plants may well disclose additional important features. In addition, the heavy utilization of the area by marine mammals is important. In the final analysis, the value of the area probably depends most on the combination of features, some of which are unique and some of which are generally characteristic of the arctic lowland and coastal environments.

[26.006] The descriptions of wilderness supplemental values and for the specific areas in the current Draft Plan, are not as through as was done for the prior Plan and so should be added to back into the new plan since this new comprehensive plan will supersede the old one. For example, the Draft Plan does not spell out Environment and Challenge as a supplemental value, nor include detail Wildlife values including the following: [10]

"Wilderness may provide habitat for rare and endangered species, which visitors would otherwise never have an opportunity to view. These species may not inherently need a wilderness habitat, but because they are close to extinction, wilderness is a sanctuary. Most of the large animals such as caribou, grizzly bear, and wolf, tend to concentrate in the mountains and foothills to the south and outside the Planning Area (in the Utukok river uplands, Colville river valley, etc.)... The second waterfowl concentration is along the Chukchi Sea coastline near Icy Cape (USDOI, BLM, 1978a). In the spring, as sea ice breaks up and moves away from shore, marine mammals may be observed migrating northward, following the ice leads. The points of land extending into the water are places where the migrating mammals tend to pass near the shore and where they may be viewed easily from land. The sites include Barrow, Cape Franklin,

and Icy Cape. Marine mammals that might be observed here include beluga whale, gray whale, spotted seal, and walrus.

[26.007] The Draft Plan's section on Opportunities for Scientific Study presents a very superficial sense of why the naturalness of the intact landscapes embodied in wilderness areas and lands with these characteristics have such value to scientific research. For example, the NW NPR-A Plan gives and overarching context, and then mentions other attributes that are valuable to scientific research, especially long-term investigations. It states, "The presence of features for scientific, educational, scenic, or historical value is an important consideration in identifying areas for possible designation as wilderness." While we recognize that such language may have been removed for policy reasons because a full Wilderness Review process was not done for this Draft Plan, it still must recognize that the presence of important features are integral to the scientific values for wilderness quality lands. Comparable descriptions for the gradation of landscapes embodying the South Area of the Reserve should also be included, as well as how maintaining wilderness characteristics will enhance the full range of long-term research opportunities:

Research opportunities in the Northwest NPR-A Planning Area have been and are still excellent. Inventories from other programs assist in identifying areas within the NPR-A containing ecological, geological, or other features of scientific, educational, scenic, or historical value. The Joint Federal /State Land Use Planning Commission for Alaska is promoting an ecological reserve system for Alaska and a number of sites have been proposed (Underwood, 1977). Ecological reserves are field sites uniquely conducive to natural science research and education. There were several ecological reserve sites proposed in the late 1970's within the NPR-A. However, one prominent site in the Northwest NPR-A Planning Area is Icy Cape, or Kasegaluk Lagoon area. National Natural Landmarks are areas that possess exceptional value in illustrating the natural heritage of the Nation. Under sponsorship of the National Park Service, a number of sites in the NPR-A having unique or noteworthy ecological, biological, or geological aspects have been examined and proposed for Natural Landmark status in two studies (Detterman, 1978: Koranda and Evans, 1975). Many of these proposed Natural Landmarks possess attributes similar to those considered in evaluating wilderness values. The proposed landmarks include land areas that represent the ecological, biological, and geological characteristics of large portions of the arctic lowland. [11]

Environmental Consequences

The ecological integrity of the North Slope is at serious risk from poorly planned, piecemeal and damaging development. The National Academy of Sciences National Research Council (NRC) March 2003 report Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope confirms that oil and gas drilling has had profound impacts on the region's environment. Those effects stretch far beyond the immediate footprint of the industrial complex itself, and are having lasting cumulative impacts on the land, water, people and wildlife of America's Arctic. In the slow-healing arctic environment, some of the changes to the landscape may persist for centuries. Now, the potential impacts from offshore development on land as well as the combined effects on wildlife and people are even greater.

The evaluation of potential impacts from oil development activities in the 1998 Northeast FEIS and other NPR-A IAP/EISs were based upon a series of proposed development scenarios that were incomplete and unrealistic when evaluated in the context of practices throughout the existing oil field complex across the region. As a result, the nature and extent of potential impacts were significantly understated.

There will be significant levels of oil and gas infrastructure and activities in the Reserve, according to the EIS. For Alt. B, it assumes that 965 oil and gas wells will be drilled, there will be 87 production pads and CPF's, 29 gravel mines, 27 airstrips, 1,478 miles of pipelines, 511 miles of infield and connecting roads, 55,302 miles of ice roads, and 57,838 line miles of 3-D seismic surveys.

[26.008] The status of the existing Alpine Satellites Development FEIS (2004) needs to be explained. Its environmental analysis was based on stipulations from the 1999 Northeast NPR-A IAP/FEIS Record of Decision, and the stipulations in place for the impact analysis assumptions. Much has changed since then, but BLM fails to address the changes in its assumed "in-field" scenario from then to now. The 2004 Alpine FEIS addressed industry proposals for development as well as BLM's anticipated Full-Field Development Scenario. Will this Alpine Satellites EIS still be relied upon for any new NPR-A development or is it considered outdated? Why is that full-field development scenario ignored? ConocoPhilips recently provided maps showing proposed pipelines and roads to the Alpine satellites, GMT-1 (formerly CD- 6) and GMT 2 (formerly CD-7) as well as Fiord West at the same time as it put forward its most recent CD-5 permit application (U.S. Army Corps of Engineers, POA-2005-1576, April 2009, Sheet 30). [12] These pad locations, road and pipeline locations differ from what was analyzed in the Alpine Satellites Development FEIS.

[26.009] The EIS also present a picture of a major, if incrementally built, road network within the NPR-A, "in addition, gravel roads could connect nearby fields to one another to allow sharing of infrastructure." Based on existing North Slope oil field development practices (except Badami and Alpine), this EIS should provide a development scenario that evaluates oil fields with connecting roads throughout, as well as within the fields, and another scenario which connects to outside the planning area to the Dalton Highway, instead of downplaying this potential and assuming these situations will not occur.

Adverse impacts from Support Bases

[26.010] We are particularly concerned that site specific impacts of support bases were insufficiently addressed. Given that the military installed DEWLine sites along the entire Arctic coastline of Alaska every 30 or so miles during the Cold War, and many of these sites are still contaminated or undergoing cleanup and restoration, so these sites were installed without public process in the first place and their existence should not be used as an excuse to perpetuate incompatible operations at these locations.

In particular, Camp Lonely and Point Lonely DEW-Line station are is inappropriate for use as an oil and gas staging area because of its location within the Teshekpuk Lake Special Area where disturbance from aircraft, road traffic and hydrological alterations of wetlands and spills could harm birds. The former staging area at Lonely is especially inappropriate for use as a staging area into the future due to the shorelines in this area being subject to dramatic coastal erosion as a result of climate change, its location within the Teshekpuk Lake Special Area, and proximity to sensitive brant/goose molting and caribou habitats that would be disturbed by noise from aircraft, road traffic, and resulting fragmentation of habitats.

Road impacts underestimated

[26.011] The EIS fails to adequately address the impacts of roads that could be constructed along major oil and gas pipelines. This needs to be done, especially because the plan does not contain stipulations which would prohibit such connecting roads (and there should be no exception if such a stipulation is included).

Air Pollution, Greenhouse Gas Emissions, and Climate Change

[26.012] The Arctic environment faces major impacts from climate change at the same time as existing and future oil and gas and industrial development poses harm to the land, animals, and human activities. We appreciate that the plan addresses impacts of rapid warming to fish and wildlife habitats and as an existing stressor on the animals.

However, while the Draft Plan provides some strong scientific information about global warming effects, it should also quantify and analyze impacts from GHG (greenhouse gas) emissions throughout all phases of oil and gas extraction and eventual consumption as well as providing mitigating measures for reducing the air emissions, including from GHG. It also

needs to quantify air pollution emissions, and cumulative impacts of these across the North Slope.

In January, 2008, the Alaska Department of Environmental Conservation (ADEC) reported that Alaska's oil and gas industry (primarily at Prudhoe Bay) is the single largest contributor of greenhouse gas emissions accounting for 29% of all statewide emissions annually (totaling 15.26 Million Metric Tons of CO2 equivalents, for only CO2, CH4, and N2O). The oil industry is the single largest sector of Title V (Clean Air Act stationary major source operating permits), comprising 73% of those emissions in Alaska.[13]

[26.013] The Air Pollution assumptions of the existing environment, environmental consequences and cumulative impacts fail to contain fundamental, factual information -- estimates of the emission locations, and quantities of air pollutants from various activities in the NPR-A, as well as in combination with the existing and future operations across the North Slope. (for example, see 4.3 Impacts of Alternative A. 4.3.1.2 Oil and Gas Exploration and Development Activities- Air Pollution Sources, and parallel sections for the other alternatives.)

Based on more recent analyses from Clean Air Act permits, this **[26.014]** EIS should address sources of major pollutants (including carbon monoxide, nitrogen oxides, particulate matter, sulfur dioxide, volatile organic compounds, other hazardous pollutants, and greenhouse gases including carbon dioxide, methane, and nitrous oxide)and their projected quantities from various activities including aircraft, drilling, production including power generation, construction, and vehicles. The EIS has no quantified information about existing levels or anticipated pollution. Even the Bush Administration identified some pollution quantities – see SEIS Table 4.3-A, p. 4-72; Table 4.4-A, p. 4-268; Table 4.5-A, p. 4-396; Table 4.6-A, p. 4-507.

[26.015] This conclusion is nonsense and unsupportable: "For the North Slope as a whole, air quality should improve in those areas where oil production currently is the greatest and will soon decreased, and would decline somewhat in areas where future development is expected to occur." (Draft Plan, Vol. 3, p. 73). Just because new development would be "distributed throughout the planning area" does not logically result in "keeping regional impacts small," instead it means that air pollution including a persistent haze seen emanating from the Prudhoe Bay oil field complex could harm air quality across a huge area.

Wilderness

[26.016] The Draft Plan fails to sufficiently analyze the environmental consequences to wilderness characteristics from opening vast new areas to leasing, exploration (seismic and drilling), and development activities and temporary and permanent infrastructure within the South NPR-A, including most of Utukok River Uplands Special Area in Alternative C and also the rest of Utukok, Upper Colville River and Kasegaluk Lagoon in Alternative D. This is because the Draft Plan subjugates Wilderness and Wild and Scenic River impacts to the section on Recreational Resources. This diminishes the analysis by neglecting to analyze all wilderness characteristics naturalness (intact natural landscapes; spirit of the land), solitude (natural quiet) and attributes or supplemental values, including wildlife, and opportunities for scientific study of intact, natural ecosystems.

Wilderness and Wild and Scenic River impacts to the section on Recreational Resources. This diminishes the analysis by neglecting to analyze all wilderness characteristics naturalness (intact natural landscapes; spirit of the land), solitude (natural quiet) and attributes or supplemental values, including wildlife, and opportunities for scientific study of intact, natural ecosystems.

[26.017] The analysis for Alternative C dramatically underestimates potential effects on wilderness and wild and scenic river values because it merely considers the "direct" footprint from a pipeline crossing of the Colville River, nor does it consider the assumption the Draft Plan (errs, in our opinion) makes that the State of Alaska's Road to Umiat, including a bridge over the Colville River will be built. [14] While such potential effects should be evaluated in the

cumulative effects section, it cannot be ignored here as there are no stipulations or other protective measures as part of the plan which would prohibit a road and bridge crossing the Colville, whether at Umiat or elsewhere. Furthermore, in Alternative C, there would be no protection from road building in the heart of the Utukok Uplands Special Area, and this would affect not only wildlife, scientific study, but also fundamental wilderness characteristics along primitive recreational values.

[26.018] Cumulative Impacts

The organization, methodology and approach to this analysis is poor. Without labeling of what is covered on each page it is difficult to understand what is in each section. With few scientific citations the analysis is largely unsupported with respect to the oil and gas development impacts across the Reserve that will take place over many decades. **[26.019]** It is also very superficial in its treatment of the cumulative effects of offshore oil and gas development, and particularly a potential trans-NPR-A Pipeline across the Reserve. In the event that any support facilities or transportation access for offshore exploration, development or production, and particularly a pipeline for Chukchi Sea development is proposed, a new NEPA process is needed, and the Final Plan should make it clear that a full environmental impact statement would be required.

We are concerned about the cumulative effects to wildlife, subsistence and other values from dangerous development like offshore oil and gas development including pipelines, roads, and staging areas within NPR-A, and from schemes like the State of Alaska's Road to Umiat and OCS pipelines. The Draft Plan has underestimated these because of faulty assumptions regarding oil and gas activities and infrastructure as we detail in Section IV of these comments.

[26.020] Sec. 4.7.6, p. 68. Other Information Considered in the Cumulative effects analysis This section incorrectly states, "More rigorous environmental standards and more environmentally prudent industry practices existing than ever before...." This is wrong for a number of reasons, including that the earlier 1999 Northeast NPR-A IAP/FEIS contained stronger land protections (Teshekpuk Lake Surface Protection Area), and dozens of stipulations that were later weakened in subsequent BLM Plans.

Many other standards and practices have not gotten stronger over the years but in fact are weaker. [15] Furthermore, the absence of State's Alaska Coastal Management Program since it was not renewed in 2011 has made it more difficult for the public, and particularly coastal residents to voice their concerns about impacts and have a meaningful role that could result in some mitigation of effects or at least better disclosure or analysis of potential effects to fish and wildlife, subsistence, the fabric of community life, cultural values, and other impacts that take place at every stage of oil and gas, including the stage of even considering leasing.

Road to Umiat

This proposed State of Alaska road would have devastating impacts on subsistence, recreation, and the core biological values that this plan attempts to protect, and its cumulative impacts need to be fully addressed.

The Road to Umiat poses direct, indirect and major irreversible threats to Alaska's wild Western Arctic which should be more fully analyzed in the Final Plan. These include negative impacts associated with the road include a loss and degradation of subsistence resources, cultural impacts, archaeological and anthropological impacts, harm to food security, human health impacts, loss of wilderness and wildlands, loss of scientific baselines associated with intact and remote landscapes, impairment of visual resources and loss of scenic beauty, degradation of wilderness recreational values and more.

This proposed road is very controversial and is opposed by many North Slope communities, including the closest affected villages of Nuiqsut and Anaktuvuk Pass, which the Final Plan could more fully elucidate. It would have major impacts to fish and wildlife and other subsistence resources, as well as the traditional and customary uses of Alaska Native people

with a wide range of effects. This scheme could have devastating consequences to the region's subsistence cultures which are inadequately addressed in the EIS. The Road to Umiat would connect no communities and is opposed by at least six resolutions from North Slope villages and organizations that fear the road's impact on their subsistence culture. The mayor of Anaktuvuk Pass wrote "building a road to Umiat will eliminate thousands of years of tradition to develop an industry that will last but a few decades." We appreciate the inclusion of the description of local tribal and community opposition to the Road to Umiat (see Draft Plan, Vol. III, Page 242).

This road also proposes to access speculative oil and gas resources with a subsidy from the State of Alaska to build it, instead of oil companies providing their own facilities to oil fields.[16]

[26.021] While BLM should analyze the cumulative impacts of the Road to Umiat, BLM should not make an assumption that a road to Umiat will be built (Vol. 2, Chapter 4, p. 33). Furthermore, it should not assume that a particular route would be built, as alternatives are still under consideration in a separate EIS process. If the agency is going to make an assumption that the road will be built, given that it is a cooperating agency on that other EIS, it cannot segment the consideration of these simultaneous processes given that the road's destination is oil and gas fields within the Reserve, as well as on lands outside of it across the Colville River. This road would not only be routed, if using the State Department of Transportation's preferred route, past nanushuk coal exploration licenses which should be g, but is intended to reach the small Umiat oil field which was discovered decades ago and would be technically difficult to produce.

[26.022] In the Draft Plan (volume III), the authors address some of the devastating impacts on subsistence, recreation, and the core biological values that this plan attempts to protect. However, the analysis is not consistent about which herds (some leave out the important Western Arctic Caribou Herd) would be impacted by the road and generally downplays impacts to other species in the area, looking at only special status species in the analysis of birds. The plan a good job of explaining some of the synergistic effects of all the proposed development plans, which it notes would have a far greater combined impact on the land than the industrial operations and infrastructure resulting from BLM's proposed oil and gas development alternatives alone.

[26.023] We appreciate that BLM included this information about the negative effects of roads in the Draft Plan: in sections on motorized traffic: "Motorized traffic along about 400 miles of roads has disturbed, impeded the movement of, or displaced caribou and other terrestrial mammals (National Research Council 2003);" and regarding Traffic and Calving: "Development might also increase disturbance of caribou by ground vehicles and air traffic in insect-relief areas along the coast, and perhaps reduce the seasonal use of coastal areas by cows and calves. The reduction in calving habitat use near oil development facilities could eventually limit the growth of the Arctic caribou herds within their present ranges and prevent the herds from reaching the maximum population size that they could achieve without the presence of development." (Vol II, page 150)

However, the analysis fails to sufficiently address, thorough a scientifically derived method, how traffic and ancillary activities from the Road to Umiat, the oil and gas fields it ostensibly would serve (and potentially development of Nanushuk coal) would affect the migration movements of the Western Arctic Herd, Teshekpuk Caribou Herd and Central Arctic Herd during some autumn and spring migrations. The Draft Plan down plays the consequences of such industrial operations where it states this "could potentially affect some individuals of each of the herds," and that "Once built, a gas pipeline would be buried and have no effect." Pipelines need to be monitored, maintained, and repaired via road traffic and or helicopter or fixed wing overflights, and there would be some level of effect. Without detail regarding the entire operations of the combined road, spur roads, oil and gas fields, and coal, it is impossible for BLM to draw a conclusion that the Road to Umiat and any associated pipelines whether above ground oil or buried natural gas "would not likely present a long-term, cumulative effect on either herd because of their ability to habituate to some pipelines and roads as evidenced by the Central

Arctic Herd's response to the Trans-Alaska Pipeline System/Dalton Highway corridor." (Draft Plan, Vol III, page 152). In fact, the National Research Council (2003) documented alterations of movements documented by early Alaska Department of Fish and Gas research, including that the TAPS divided the Central Arctic Herd's calving areas into two. This analysis needs to be redone.

Offshore Oil and Gas Impacts

[26.024] The treatment of the cumulative effects of offshore oil and gas development, especially from Chukchi Sea existing and potentially future leasing is superficial, incomplete, and draws many conclusions of small impact without scientific or any other supporting documentation.

The Draft Plan should better document the full past, present, and future onshore operations, including staging, logistical support, and scientific survey operations that are done in support of offshore exploration, development, and production.

What onshore environmental baseline studies have already been done in the Reserve in support of offshore lease activities and infrastructure? By industry? Government, Academia? Others? Is this a transparent process and how does the public know what is going on, whether local residents or more broadly? The effects of environmental study operations combine to have an effect on the land, its wildlife, and people that is often underestimated and should be anticipated to increase.

[26.025] We disagree with the assumption that for Chukchi Sea Development "onshore facilities to support offshore development in the Chukchi Sea could likely be concentrated near the coast and would cover a relatively small area." (Draft Plan, Vol. 3, p. 243). First, there is no actual development proposal on the table to evaluate, so that the least the uncertainty of what it may entail – and the social stresses that such situation entails – should be acknowledged. Second, there is no scientifically derived analysis to support this assumption. Third, experience shows that there are a variety of activities, infrastructure, and pollution that will take place over many locations, and a real, hard look could be made of such operations already taking place in the Beaufort Sea as well as derive real data from other operations. Fourth, even if it was a "small" location, depending on the geographic place or the nature of the activities for the life of its use, even a "small" support facility could have a major, irreversible effect.

[26.026] The analysis in the Draft Plan for a "low probability, Very Large Oil Spill (Section 4.11, Vol. 3) fails to analyze the effects of a major blowout like Deepwater Horizon, nor to incorporate any of the information that resulted from that spill regarding impacts, including to adjacent sensitive coastal estuaries, shorelines, mud flats, and nearshore waters in addition to the marine effects.

Section II.
Inadequate description of oil and gas exploration
and development infrastructure and activities

[Preamble 26.027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 037, 038, 039, 040, 041] Vol. 2 – Chapter 4

[26.027] Sec. 4.2.1.2 Oil and Gas Exploration and Development Activities – Introduction

p. 7. "A fundamental assumption of these scenarios is that the level of future activities is directly related to the petroleum resource potential made available for leasing and development."

This assumption incorrectly assumes that the amount of roads, gravel pads, aircraft support levels, and other infrastructure and activity are proportional to the size of the oil and gas resource potential.

[26.028] Petroleum Operations in Arctic Conditions – 1. Past experience.

p. 8 While this description of "past experience" lists the Alpine Satellite fields built to date (CD-3 and CD-4) it fails to include the additional prior proposals for development, including all of the areas ARCO and ConocoPhillips has identified, as well as the existence of BLM's Alpine Satellite EIS and its past decisions made under that EIS.

Furthermore, this section mentions the wells drilled to date in the Greater Moose's Tooth and Bear Tooth Units, but it does not describe the plans that industry has proposed within its Unit Plans of Exploration or Plans of Development.

Additionally, it is unclear how BLM is treating the existence of the Alpine Satellites EIS. Is it replacing that document with new assumptions about development?

[26.029] Petroleum Operations in Arctic Conditions – 3. Logistics

p. 10. The specific impacts of these staging areas need to be analyzed in detail, as they comprise a very significant source of impact, and those which are inappropriate for particular alternatives should be clearly identified here, not vaguely mentioned with the implication that their consistency would be considered. In particular, Camp Lonely is inappropriate for use as an oil and gas staging area because of its location within the Teshekpuk Lake Special Area, and others should also receive site specific analysis for impacts.

> "Remote staging areas are used to support exploration, development, and abandonment activities. A staging area can be established for year-round use and typically consists of facilities housed on gravel pads. Existing pads at Inigok, Camp Lonely, Ikpikpuk, Cape Simpson, Peard Bay, Tunalik, Driftwood, and Brady or on Native corporation lands within the NPR-A could serve this purpose, provided the consistency of their use with specific alternative provisions. These camps would contain storage tanks for fuel, warehouses for supplies, housing for personnel, and permanent gravel airstrips capable of handling large capacity aircraft, such as the Hercules C-130. Staging areas located on the coast also would be designed as receiving terminals for sealifts."

[26.030] p. 11. The BLM must provide actual numbers of aircraft flights, including fixed wing and helicopter, or describe the basis used to calculate these estimates. Aircraft disturbance is a significant source of effects on wildlife and people ranging from subsistence to recreational users of the area.

[26.031] p. 11. The assumptions of construction and operational flights are significantly lower than monitoring studies have shown for Alpine and Northstar. (See TWS and Miller, Broken Promises)

[26.032] pp. 11-12. The example cited for the Alpine satellite CD-3 from 2006 notes that the flight numbers are "a minimum" because of weather and mechanical problems with the camera. Have other monitoring studies been done since then? Other monitoring reports have shown much higher flight numbers during construction and drilling, and these should be provided.

Exploration – 3. Seismic Survey Types

[26.033] p. 14. 4-D seismic surveys are described as "repeated seismic surveying... acquitted over producing fields to monitor changing reservoir properties resulting from production." The EIS should describe the line spacing and geographic scope of such surveys, and how many times they could be expected to take place over the life the fields.

[26.034] p. 14 This description of seismic survey levels (1-2 in NPR-A) understates the number of surveys that have taken place in NPRA during some years, as Fig. 4-1 shows 4 years when 3 surveys took place in the Reserve.

[26.035] p. 14. The total number of vehicles involved in seismic exploration surveys (for camp "cattrains" and survey vehicles, as well as related fuel hauling operations) should be provided.

Exploration – 4. Seismic Surveys and Evolving Views on Resource Potential

[26.036] pp. 16. The statement, "new seismic acquisition within the NPR-A has ceased," is inaccurate, as later in the paragraph it states that "development in the Greater Mooses Tooth and Bear Tooth units could lead to updated seismic acquisition," and on page 18 further 3-D exploration for gas prone areas is described. Furthermore, 4-D surveys may be carried out in areas that are developed, and this potential should be added to the description.

p. 19 We are concerned about the potential for summer exploratory drilling at the existing gravel pads at Umiat. This possibility was not described in the May 2008 SEIS (p. 4-21).

p. 20 Despite the shallow depth at Umiat, will drilling be quicker given that the oil is technically difficult to access given its location within the permafrost?

[26.037] p. 20 Better documentation is needed for how assumptions were derived for the number of exploratory and delineation wells that may be drilled for an oil field project. This section states that "two to four successful delineation wells would likely be drilled to establish reservoir continuity over an area. For example, a possible field-development project consisting of two production well pads might require six wells (two exploration and four delineation wells." How many "unsuccessful" exploratory or delineation wells are also expected? Earlier the DEIS stated that 15 industry wells of the total 29 wells drilled to date were in the Greater Mooses Tooth Unit (p. 8). Later the description of potential development in the Greater Mooses Tooth and Bear Tooth units notes that the Spark-Rendezvous accumulation already has 9 exploration/delineation wells drilled (p.53). Therefore, the general assumptions regarding exploratory/delineation wells understates the potential sources of impact for a particular area.

PAST COMMENTS OLD NUMBER OF WELLS EXCEEDED EXPECTIONS

[26.038] p. 21. The DEIS has dropped language from the prior SEIS (p. 4-23) that clearly explained the shortened ice road season, "the winter drilling season has been reduced from 208 days in 1970 to 103 days in 2003 as a result of rising global temperature (ACIA, 2004). Given the shortened season due to warming, the average winter season based on a 25 year record of 145 days is not relevant.

Discovery and Development – Overview

[26.039] For the impact analysis, BLM needs to connect up its various hypothetical development scenarios to show a single, or a few different, scenario maps. It is impossible to visualize how these different scenarios fit together. Given that oil discoveries have been made, and there are two existing units within the NPR-A, a better depiction of this potential development using scenarios needs to be mapped. Furthermore, BLM assumes that the oil discoveries in the Greater Mooses Tooth and Bear Tooth Units, and Umiat field oil will be developed. Mapped scenarios for these areas should be provided.

The status of the existing Alpine Satellites Development FEIS (2004) needs to be explained. That document contained industry proposals for development as well as BLM's anticipated Full-Field Development Scenario. Will this Alpine Satellites EIS still be relied upon for any new NPR-A development or is it considered outdated? Why is that full-field development scenario ignored? ConocoPhilips recently provided maps showing proposed pipelines and roads to the Alpine satellites, GMT-1 (formerly CD- 6) and GMT 2 (formerly CD-7) as well as Fiord West at the same time as it put forward its most recent CD-5 permit application (U.S. Army Corps of Engineers, POA-2005-1576, April 2009, Sheet 30). [17] These pad locations, road and pipeline locations differ from what was analyzed in the Alpine Satellites Development FEIS.

[26.040] p. 22. The assumption regarding the hypothetical development of an oil field, plus nearby satellites, has dramatically been reduced, without any explanation of the rationale for this difference. Now, the scenario shows each field with either just one main pad with a CPF, airstrip, camp, and storage pad, or with one additional satellite field, in sharp contrast to prior scenarios shown in the NE NPRA SEIS (2008) or the Alpine Satellites FEIS (2004). The mapped

diagrams (Fig. 4-4, 4-5) and 4-6) fail to show roads along the 10-15, 12-18 or mile routes of the "feeder line to economic zone hub," nor to explain what an "economic zone hub" is (see pp. 25-31). Even though USGS oil projections are less, no justification is provided for the size of the facilities.

By contrast, BLM's prior assumptions in the SEIS stated, "Figure 4-1 shows the reasonable hypothetical layout for a CPF with five satellite fields." (SEIS 4-24; see Fig. 4-1 p. 4-1). Therefore, the overall estimates for the direct areas covered by gravel fill and excavation, as well as gravel consumption required have been drastically reduced per "basic development complex." Compare this EIS, Table 4-3 p26 for "joint oil development complex" vs "basic development complex" in SEIS, Table 4.2-C, p. 4.26. Furthermore, we noted in our extensive comments to the SEIS ways in which that scenario had understated impacts.

[26.041] p. 22. There has been a major change in assumptions regarding road access to most fields within NPRA to areas outside the Reserve. The SEIS had stated, "while some satellites, such as two proposed by ConocoPhillips (CD-6 and CD-7), could connect by gravel road to the existing Alpine CFP, we anticipate that development in the planning area would generally not connect by road to areas outside of NPR-A. Winter ice roads or packed snow trails would be used to move heavy equipment and material s from other North Slope oil fields, rather than a permanent road." (SEIS p. 4-24).

[26.042] p. 23. The Nikaitchuq field is not a comparable development, as it is largely an offshore field and the economic costs and feasibility for facilities will be different than industry's calculations for onshore field development. Furthermore, the information that it has been developed from "two production pads," may present an incomplete picture. There is also additional storage at another onshore site. Furthermore, additional development may yet take place, as three offshore pads and one onshore pad had been proposed for permitting for which direct gravel fill and excavation for that project was estimated to affect 183.3 acres. (U.S. Army Corps of Engineers, August 15, 2005, POA-2005-1243).

Discovery and development – 2. Staging Areas

[26.043] p. 32 BLM should not be proposing new gravel fill causeway developments along coastlines may occur, and in fact should prohibit them, due to the cumulative impacts to nearshore fish habitat documented by the U.S. Army Corps of Engineers from the Endicott and West Dock Causeways. CITE

[26.044] p. 32. BLM should not assume that Point Lonely DEW-Line station is an appropriate staging area, given its location within the sensitive Teshekpuk Lake Special Area, as well as its location along a section of rapidly eroding Beaufort Sea shoreline.

[26.045] p. 32. BLM should conduct site-specific habitat and other analyses for these staging area in order to have sufficient baseline information available to evaluate whether or not each of them is located in an appropriate area for long-term dedication to permanent additional infrastructure and intensive transportation activity whether by land, air or sea. Just because these sites were used in the past for some exploratory activity does not mean that they should be used into the future, particularly the Point Lonely DEW-Line site and Camp Lonely.

[26.046] p. 33. BLM should not make an assumption that a road to Umiat will be built. Furthermore, it should not assume that a particular route would be built, as alternatives are still under consideration in a separate EIS process. This project is controversial and opposed by many North Slope communities, including the closest affected villages of Nuiqsut and Anaktuvuk Pass. CITE.

Discovery and Development – 3. Gravel requirements.

[26.047] p. 34. BLM should more fully explain the gravel limitations within NPRA, "gravel is a scarce commodity," versus the claim that "sand and gravel could also be extracted from new sites within the NPR-A." Where are the potential gravel sites? BLM should also address

whether it is environmentally feasible to blast bedrock outcrops in the foothills area of southern NPR-A, given the locations of nesting peregrine falcons and other raptors as well as paleontological resources. Where are the proposed bedrock outcrop areas?

[26.048] p. 34. BLM has taken statistics from the National Research Council (2003) on gravel mined areas vs gravel fill for North Slope development out of context by limiting its consideration to only a partial time frame (which is after most of the oil fields were in place) which severely downplay the impacts of potential gravel mines for new oil field development in this new region west of the Colville River. Instead, if the whole duration of that study was considered, the amount of gravel mine areas (6,364 acres) compared with 9,225 acres total gravel footprint (or out of total 10,990 acres impacted with the gravel mine area not included); see NRC 2003, Table 4-4, p. 44. These figures did not include the Dalton Highway. Therefore, if connecting roads between fields are planned, additional gravel would need to be mined, and sources identified.

Discovery and Development – 4. Development and Production Well Drilling

[26.049] p. 35. This section on development and production well drilling fails to acknowledge the drilling limitations, whether technical or economic, that industry generally cites for distances between production pads within a reservoir, including satellites.

[26.050] p. 35. We appreciate that BLM "anticipate zero surface discharge of wastes in the planning area" for drill muds and cuttings. This should be supported by lease stipulations to that effect.

Production – 3. Waterflooding

[26.051] p. 37 While BLM states that "seawater supplies are virtually unlimited" for use in waterflooding, if lakes or below permafrost groundwater is not used. This discussion fails to address the site-specific locations for such sources, and potential issues related to changing estuary conditions if taken from lagoon or small bay areas.

p. 38. While USGS has assumed that the new developments can use existing Waterflood sources, some of the newer, smaller developments such as Oooguruk or Nikiachuq have reported difficulty making economical arrangements to use existing waterflood sources from the major oil fields of Kuparuk or Prudhoe Bay. Production – 4 Miscible Injection and Fracture Stimulation

p. 38. "Fracture stimulation or "fracking" is sued to enhance the production of fluids from comparatively tight reservoirs; i.e. reservoirs with low permeability. Its use is common on the North Slope, particularly in oil production from the Alpine oil field and satellites." **[26.052]** We note that the prior NPR-A EISs, including the most recent NE NPRA SEIS (2008) failed to address fracking. A more complete explanation of the nature of this process should be provided here. Could it be used for oil shale resources, recently identified by USGS to be present within the NPR-A, and would this process be the same as has been done at Prudhoe Bay, Kuparuk, or Alpine? What is known regarding the chemicals used in the process?

Transportation – 1. Regional oil and gas transportation

[26.053] p. 39. While Alyeska has said that the Trans-Alaska Pipeline System can operate down to throughputs of about 350,000 barrels, as the EIS notes, it should also address additional information on this issue regarding low throughput capabilities. The oil company BP has stated in documents obtained by the courts that it could operate TAPS for many more decades.

p. 40 A number of natural gas pipeline permit applications have been filed.

[26.054] p. 40 If this EIS is going to address the possibility of a pipeline from Umiat "parallel to a road proposed by the State of Alaska [i.e. road to Umiat] or by some other southerly route," those roads need to be specifically described and analyzed here, or their discussion should be dropped as too speculative.

Transportation – 3. Future NPR-A Pipelines

p. 40 This discussion of future pipelines ignores the fact that there are known oil field discoveries and two oil field units in NPR-A, as well as the fact that oil companies have has proposed at least initial development of some of these fields (see especially Lookout, CD-6 and Spark, CD-7; ConocoPhillips and Anadarko Petroleum Corporation, September 2002, Supporting Documentation for Alpine Satellite Development Program: Introduction and Project Description). Furthermore, BLM has addressed some of the development proposals in the Alpine Satellites Development EIS (2004). Therefore it is perplexing for BLM to state, "at present there is no accurate way of predicting where or when new commercial fields would be discovered and developed."

[26.055] p. 43 It is unclear why Fig. 4-9 shows a straight line from Alpine through the Colville River to a location near Umiat, in contrast to the route identified in Fig. 4-2, p. 4-35 of the SEIS (2004).

[26.056] P. 43. While the locations of regional pipeline corridors for "undiscovered commercial sized accumulations and the timing of their discoveries is impossible to predict" the EIS should address the locations of potential pipeline corridors for the discovered fields (i.e. Lookout and Spark etc.).

[26.057] p. 43. This document has completely dropped the alternative pipeline construction mechanism of horizontal directional drilling which may be appropriate for some locations of crossings. The prior NE NPRA SEIS stated, that "pipelines crossing large rivers, such as the Colville River, could be buried using horizontal directional drilling techniques similar to those used to drill for oil at the Alpine oil field (see SEIS p. 4-35).

Furthermore, the prior EIS appropriately considered that in some places "elevated pipelines would likely cross narrow streams to minimize impacts to stream banks and riparian vegetation and to avoid potential problems associated with corrosion, maintenance, and abandonment of buried pipelines... narrow streams could be crossed by elevated pipelines on suspension spans... if a properly designed elevated pipeline crossing was to be used." **[26.058]** Another issue that needs to be addressed in this EIS is the costs of bridges over rivers, including the Colville. The SEIS (p. 4-35) said, "it has been determined that the construction of a bridge over the Colville River would be expensive," but the issue is not addressed at all in the EIS, despite the number of potential rivers that may need to be crossed by pipelines or roads. The impacts of all these different river and stream crossings need to be addressed by BLM in this DEIS.

Production – 4. Roads

[26.059] p. 45. While this EIS assumes in the beginning of this section that NPR-A roads would not be connected to the major North Slope oil and gas facilities linked by the spine road to the Dalton Highway, it does elsewhere acknowledge the possibility of the State of Alaska's Road to Umiat project (without addressing any of those issues even though BLM is a cooperating agency on that EIS, and various alternative routes for that road are currently under discussion) that could connect NPRA development to the Haul Road.

The EIS also present a picture of a major, if incrementally built, road network within the NPR-A, "in addition, gravel roads could connect nearby fields to one another to allow sharing of infrastructure." Based on existing North Slope oil field development practices (except Badami and Alpine), this EIS should provide a development scenario that evaluates oil fields with connecting roads throughout, as well as within the fields, and another scenario which connects to outside the planning area to the Dalton Highway, instead of downplaying this potential and assuming these situations will not occur.

[26.060] p. 46 This section should describe how many aircraft monitoring flights would be conducted during summer and when ice road access is not possible, if no permanent gravel roads are built along pipelines.

Resource Potential and Petroleum-Related Activities – Assumptions

[26.061] p. 48 The EIS assumes that "discovered oil and gas in federal subsurface in the Greater Mooses Tooth and Bear Toot units would be developed as satellites to the Alpine field and that discovered oil near Umiat would also be produced.... (p. 49) Discovered oil in the Greater Mooses Tooth units and near Umiat may begin production in less than 10 years." Therefore, it needs to show the potential oil field layouts, pipelines, roads, and other necessary facilities, instead of relying on vague written descriptions for these developments.

p. 49. This EIS "does not anticipate any unconventional oil and gas development in the NPR-A," and therefore fails to analyze these impacts. This should be done in a future EIS.

[1] 77 FR 19318-19319 (March 30, 2012); http://www.blm.gov/ak/st/en/info/newsroom/2012/may/Comment_Period_for_National_Petroleum_Reserve_in_Alaska_05262012.htm
[2] Alternative A and C only make the actual lake bed of Teshekpuk Lake unavailable to oil and gas leasing, and after the deferral ends, oil and gas leasing, exploration, and development operations could begin.
[3] National Petroleum Reserve in Alaska Task Force. 1978. Study Report 2, Values and Resource Analysis, Vol. 2. Department of the Interior, 105 (c) Land Use Study, Anchorage. P. 4-19.
[4] The Interior Department was tasked to carry out the NPR-A Studies under sec. 105(c) of the Naval Petroleum Reserves Production Act of 1976 (PL 94-258).
[5] Naval Petroleum Reserves Production Act of 1976. 42 USC § 6504.
[6] Secretary of the Interior. June 3, 1977. National Petroleum Reserve in Alaska, Designation of Special Areas. 42 Fed. Reg. 28723-24.
[7] See U.S. Army Corps of Engineers. February 1999. Beaufort Sea Oil and Gas Development/ Northstar Project, Final EIS; and related public comment including Greenpeace, March 10, 1999. The late Dr. Sackinger also repeatedly raised concerns on issues of pipeline integrity for buried subsea pipelines and their shoreline transition zones during public hearing and comment.
[8] Times-Picayune, May 20, 1997, Oil spill may be much worse than original Texaco estimate, p.A1. Times-Picayune, May 23, 1997, Testing to reveal oil spill's effects, p.A1.
[9] International Herald Tribune, June 3, 1995, Sakhalin Town Has No One Left to Fight Oil Spill.
[10] Northwest NPR-A IAP/FEIS, Vol. 1-09 section 3, pp. 159-160).
[11] Northwest NPR-A IAP/FEIS, Vol. 1-09 section 3, pp. 159-160).
[12] This map does note, "with the exception of CD5, all other future pads and road/pipeline routes are preliminary and subject to change.
[13] Alaska Department of Environmental Conservation. January 2008. Draft Summary Report of improvements to the Alaska Greenhouse Gas Emission Inventory.
www.climatechange.alaska.gov/docs/ghg_ei_rpt.pdf (accessed Jan. 14, 2008). This report did not cover the GHG's chloroflourocarbons, hydrofluorocarbons, perfluorocarbons, halons, and suphur hexafluoride.
[14] Draft NPR-A IAP/EIS, Vol. 2, pp. 4-487.
[15] The Wilderness Society, 2009, Broken Promises: The reality of oil development in America's Arctic, 2nd Edition
http://wilderness.org/content/broken-promises-reality-big-oil-americas-arctic
[16] http://northern.org/programs/arctic/western-arctic/roads-to-resources/easy-to-start-impossible-to-finish-report
[17] This map does note, "with the exception of CD5, all other future pads and road/pipeline routes are preliminary and subject to change.

Wild and Scenic Rivers
Jenna Hertz and Pamela Miller
Northern Alaska Environmental Center

We are pleased that the BLM has fulfilled is duty to consider potential additions to the National Wild and Scenic Rivers System during this land use planning process. As you mention in the Draft Plan, "it would be difficult to argue that any particular river in the south NPR-A did not possess outstandingly remarkable values, given the unique and remote setting when evaluated in a national context, and the near necessity for recreationists to use rivers to move through the area in the summer." [1] BLM found 12 rivers eligible for consideration of Wild & Scenic River status because of their outstandingly remarkable values (we identify additional values for some of these, see below). Protecting these rivers from large-scale, permanent industrial development is perhaps the most important thing we can do to ensure that these recreation, subsistence, and wildlife values are passed on to future generations.

Wild and Scenic River designation is a good tool to this end. All 12 nominated rivers occur at least partially within the expanded Utukok River Uplands or (Upper) Colville River Special Areas. Protection of these rivers is essential to the integrity of the watersheds at large and the values of the Special Areas. Therefore we urge BLM carry forward the 12 rivers as included in Alternative B with determinations as suitable and to recommend them for Congressional designation as Wild Rivers. This step, when combined with the unavailable for leasing designation for the Special Areas, as proposed in Alternative B, will provide meaningful conservation results into the future from this first ever Plan for these remarkable areas in the South NPR-A having little, if any, oil and gas potential.

Recreation

Rivers are the coursing veins of the arctic tundra. It is indescribably pleasurable to travel the age-old path of nutrients. Traveling along these rivers in the Western Arctic, far from the bustling traffic, gleaming mirrors, and buzzing communication devices that frame our modern lives, travelers have the increasingly rare pleasure of getting to know a piece of earth as it was made. **[26.062]** Based on our on-the-ground experience with our members, public meetings, and interaction with Alaskan guiding companies, NAEC wishes to contradict BLM's assumption that "recreational activity will likely continue at current levels." [2] In the coming years, we expect recreation in this area to rise dramatically as wild lands / primitive recreational experiences become increasingly rare on our planet. Over the past few years, local guides have noted dramatic increases in river uses on the Utukok, Kokolik, and Nigu. This is all the more reason to protect these river corridors as prized components of our National Wild and Scenic River System.

Subsistence

While modern adventurers are increasingly drawn to Western Arctic Rivers, indigenous people have relied on them for thousands of years as routes for travel and habitat for their subsistence cultures. Helga Eakon of the US Fish and Wildlife Service describes subsistence as "a way that Native peoples of Alaska have preserved their cultures. This way of life is not confined to the land. It stretches out to the sky and the waters and rivers." [3] Especially in the winter, rivers provide easy routes to travel and navigate by. Simon Paneak writes that the Nunamiut people set traps along rivers throughout the Brooks Range and had a tradition of killing caribou in the Colville River. [4] Paneak's family traveled, camped, and fished along the Colville, as was the tradition before villages were settled permanently. The Nunamiut continue to rely on caribou as a source of food, clothing, and culture. Gates of the Arctic National Park describes the relationship between caribou and Nunamiut people: "this animal is at the foundation of their history; it pervades their daily life; and it is a symbol of their unique inland culture. Caribou hunting is pursued with passion and pride, as an endeavor requiring great skill, and it is underlain by deeply held spiritual beliefs. Today, as in the past, caribou symbolize what it

means to be Nunamiut." [5] Inupiat people have a history of using many of these rivers, especially the Colville for similar uses, although most cultures emphasized the sea. In order to follow and hunt the caribou, modern hunters rely on intact rivers for navigation and travel. They are also routes for moose hunting areas and remote areas for trapping wolverine. [6]

Because of this history of subsistence use, many rivers contain important archaeological and cultural sites within a mile of their banks, and Wild and Scenic River designation could serve to protect at least ½ mile on each side of the river banks for these incredible resources. **[26.063] Wild and Scenic River designation is an important step to protecting subsistence resources and activity needs in the Nigu, Etivluk, Utukok, (where subsistence is not noted as an outstandingly remarkable value by BLM in the Draft Plan, but should be added to Table 3-23),** Kiligwa, Awuna, Colville, Kokolik Rivers and Carbon and Driftwood Creeks. We note that the lower reaches of the Colville River (not proposed for Wild River due to complex land ownership patterns among other reasons) are vital to people from Nuiqsut and Anaktuvuk Pass for subsistence activities and travel route and because the habitat supports subsistence resources such as fish, birds, moose and other mammals. We recognize that we give a mere sketch of the importance of these rivers to subsistence activities and resources and that people from other villages also depend on the fish, wildlife, and other subsistence from them as well as that subsistence use of these rivers is more extensive than described herein. For example, the Utukok and Kokolik Rivers flowing into Kasegaluk Lagoon (in its section south of NPR-A) - a vital subsistence resource - are nearby the village of Point Lay. Subsistence activities would continue to be allowed in any of the recommended Wild and Scenic River areas, according to the information from BLM and available to us, and this was an important factor in our evaluation of the benefits of Wild River as a conservation tool.

Fish

The Wild and Scenic River Act enumerates "fish" as an Outstandingly Remarkable Value. [7] Three of the Rivers selected, the Kokolik, Utukok, and Upper Colville are anadromous waters, containing important habitat for Pacific salmon (pink and chum), [8] and other fish should be added as outstandingly remarkable values to these rivers on to safeguard the integrity of this important Alaskan subsistence and ecosystem resource. Freshwater fish are a major subsistence resource for the village of Nuiqsut. [9] Alternative B affords the best protections to these fish and Alternative D is unacceptable because it has no comparable provisions for designating these lands, and these rivers that flow through them, as unavailable for leasing and it also fails to include the protective measures of Lease Stipulations K-3a, K-3b, and K-8b. Alternative B is safest because it opens 52% less land to oil and gas leasing than Alternative D. Oil and Gas leasing poses a great number of risks to fish including acoustic disturbance, injury at water-use intakes, altered water quality and quantity, water withdrawals that can harm overwintering fish habitats, gravel extraction from river floodplains, physical habitat changes, point and non-point source pollution, increased turbidity and sedimentation and barriers to fish movements. The net result of these risks results in behavioral changes, diminished conditions, susceptibility to pollutants and disease, shift in fish species distribution and eventually, mortality of this critical subsistence and ecosystem resource. [10]

Wildlife

Caribou are a keystone species in the arctic. Their shed antlers add a touch of majesty as they slowly intertwine with the mosses and lichen that made them grow. Caribou are endlessly giving vessels in the tundra cycle of life. Their hoof prints aerate the soil giving breath to new life. Their paths blaze routes used by many. Though their patterns are difficult to predict, many of the rivers nominated for Wild and Scenic occur in caribou migration corridors and provide fresh drinking water. All 12 rivers proposed for Wild and Scenic occur within the summer range of the mighty Western Arctic herd. The Western Arctic Caribou Herd Caribou crosses every river proposed for Wild and Scenic except the Awuna in the summer. [11] The Western Arctic Herd calves in the Utukok River Uplands where the Utukok and Colville flow. [12] The Teshekpuk Lake Caribou Herd also is known to migrate through the Upper Colville region. [13]

Golden Eagle nesting sites occur in along the Utukok, Nigu, Kuna, Ipnavik, Kiligwa and Driftwood Creek. [14] Peregrine Falcons nesting sites occur on the Utukok, Carbon Creek, Kiligwa, Colville, Ipnavik, Etivluk, and Carbon Creek. [15] The Utukok and Kokolik are important habitat areas to Tundra Swans, [16] Greater White-Fronted Geese, [17] Canada Geese, [18] Long-tailed Ducks, [19] Glaucus Gulls, [20] Pacific Loon, [21] and other birds. All 12 rivers exist in an area where Grizzly Bear density is 10-30 bears per 1,000 square kilometers. [22] This density is some of the highest in the Reserve and bears rely on river corridors for travel and foraging. Five of the rivers listed provide important habitat for moose. The Colville, Ipnavik and Kuna are high density moose sights and the Etivluk and Nuka rivers are medium density. [23] The Utukok and Kokolik occur in regions that host predicted summer habitat or muskox. [24] The Nuka, Kiligwa, Kuna and Ipnavik are in a region where there were muskox sightings between 2008-2010. [25] Protection of these rivers is critical to the protection of these important species and the continued balance of the arctic ecosystem at large. For these reasons, we support the BLM's designation of Wild and Scenic Rivers under alternative B.

Visual Resources

As the photos in this letter show, the Western Arctic's rivers are places of both sublime and subtle scenery. The land is open, the views expansive. Visual intrusions from oil and gas activities and other development therefore can be seen from great distances. We support Alternative B's classification of Visual Resource Management (VRM) Classes and proposed management of the 12 proposed suitable Wild River corridors as VRM Class I, with other buffers managed as VRM Class II, preferably, or III to minimize impacts to the stunning scenic resources that these rivers contain.

Outstandingly Remarkable Values at Risk from Oil and Gas Leasing

It is impossible to allow oil and gas leasing and development without jeopardizing the outstandingly remarkable values for which the rivers should be designated as Wild Rivers. Exploration and development comes with greatly increased aircraft over-flight traffic and other noisy activities. The presence of these aircraft would seriously compromise the integrity of the primitive recreation experience and jeopardize subsistence hunting and cultural ties to the land. Permanent infrastructure would damage scenic, geological, and cultural values. Wildlife would be impacted by noise, air, and water pollution, as well as increased traffic endangering the subsistence balance that has prevailed in the western arctic since time immemorial. The National Wild and Scenic River System was designed in the late 1960s largely in response to the proliferation of dams on America's once-wild Rivers. In order to remain relevant and afford maximum protections in Alaska's Western Arctic, Wild and Scenic Rivers should be protected within large areas of land that are unavailable for oil and gas leasing.

Conclusion

We believe that the BLM's plan would be strengthened by the inclusion of more site-specific information on these rivers. The Draft Plan's analysis does not do justice to these incredible waterways (see Table 3-32, Vol.1, page 426). In the sections, below, we provide specific information which supports adding Subsistence to the outstandingly remarkable values of the Nigu, Etivluk, and Utukok Rivers and Recreation to these for Driftwood Creek in the Final Plan, and these should be added to Table 3-32. [26]

For some of the rivers we did not have sufficient information to assess their outstandingly remarkable values for subsistence.

[26.064] It would also be helpful if the rivers proposed for Wild and Scenic River designation could be labeled in all maps, as many names are not shown. Most, but not all, of the studied rivers have Inupiaq names but in recognition of their extraordinary cultural values, it would be appropriate for all of them be identified by their Inupiaq names.

We urge the BLM to adopt its conclusion presented in Alternative B that "all 12 eligible rivers... be found suitable and recommended for inclusion in the National Wild and Scenic Rivers

System, to be managed as Wild Rivers." [27] We strongly support the speedy inclusion of these 1,135 miles of river corridor into the Wild and Scenic Rivers System where they must be managed to remain "free flowing and unpolluted," [28] and to protect their outstandingly remarkable values. These criteria are incompatible with oil, gas, gravel mining, water reservoirs construction, and other activities and development. While the recommendation from this plan for Wild and Scenic River management does not legally preclude development, in order to seriously protect these rivers "for the benefit and enjoyment of present and future generations," we urge you to determine that these 12 rivers are suitable for inclusion as Wild Rivers and recommend them in the Final Plan. We urge you to do this for both in areas where Alternative B allocates the Special Areas as unavailable to leasing, as well as those segments of the Utukok, Kokolik, and Awuma Rivers not so designated in Alternative B.

As the BLM notes, these regions will face stress due to climate change over the life of the plan. Oil and gas drilling will exacerbate this stress and contribute to climate change and is unacceptable in Wild and Scenic River areas. Alternative B is the only alternative that meets the BLM's stated purpose and need in this plan when it comes to preserving wild river values and providing maximum protections of these values within Special Areas. Its full set of conservation measures, including determination as suitable and recommendations for all 12 rivers for inclusion as Wild Rivers in the national system will also better protect the environment, public use of the land, and public health.

The Rivers – Descriptions and Outstandingly Remarkable Values

The Nigu - Rivers nominated as Wild and Scenic need only one outstandingly remarkable value. The Nigu contains outstandingly remarkable values in just about every category, to all user groups. It is a favorite river of Fairbanks-based guides and widely referred to as a "gem" by recreational and local users. It is a river that we expect to see dramatically increased tourism and recreational use over the span of this plan. In the summer of 2012, the guiding company, Arctic Treks, plans two trips to the Nigu, for backpacking and rafting. [29] A float trip down the Nigu includes multiple remarkable values that can be explored from virtually any campsite. At the headwaters, where most groups begin, there is a wolf den and great array of wildlife. Nigu Bluff has extraordinary scenic value, is topped with sparkling blue-green chert and, like the more protected Colville, hosts nests of rough legged hawks and other raptors. Last year, an unusual black bear was spotted in this area by floaters.

Etivulk Lake, or Qupyuvak located about 1 mile from the Nigu, is an registered Archeological District (1988). It served as a village and camp site and is recognized as an area of significance for science, prehistorical, and Historic-Aboriginal by the National Register of Historic Places. [30] Along the shores of the lake, one can still discover subterranean homes of Arctic indigenous peoples dating back around 5,000 years (see Patrick Endres Photo). [31] In addition to its cultural significance, Etivluk Lake is and incredible place for hunting and recreation. Surely, the protection of Etivluk Lake is directly tied to the protection of the Nigu. **[26.065] Although the Nigu does not show up on the map, the River is identified as a subsistence use area for the village of Anaktuvuk Pass. [32] People from villages as far as Ambler have been reported to travel to the Nigu over winter trails for subsistence hunting and trapping. We recommend that subsistence be added as an outstandingly remarkable value of the Nigu, in addition to the other values BLM correctly listed.** Additionally, the Nigu begins within the Gates of the Arctic National Park, which is all the more reason to preserve this river. The Nigu is one of the most eligible and suitable rivers in the state for Wild and Scenic River status.

Etivluk - The Etivluk was identified by Ned Rozell and Dorte Dissing of the University of Alaska Fairbanks as one of the most remote locations in Alaska. They found that "the farthest place from an Alaska village or town in mainland Alaska was a bend of the Etivluk River about 15 miles from its confluence with the Colville River on Alaska's north slope. The closest villages--each about 120 miles from the river bend--are Ambler to the southwest and Atqasuk to the north." [33] This remoteness makes the Etivluk outstandingly remarkable in terms of recreational experience. The Etivluk is the connecting river a popular ancient migration route

from the Nigu to the Etivluk to the Colville. With packrafts, some recreational users have even done this journey as a Brooks Range traverse, beginning at the headwaters of the Kobuk. [34] Northern Center members canoeing this route in July 2011 reported seeing virtually no trace of human life (aside from aircraft) from the headwaters of the Nigu all the way to the Colville River and then along it to Umiat (where this abruptly changed). Protecting the integrity of the Etivluk is essential to maintaining this unparalleled recreational experience. The Etivluk is noted for hosting medium density of moose and the BLM is right in listing wildlife as an outstandingly remarkable value. [35] **[26.066]** The Etivluk is identified as a subsistence use area for the village of Anaktuvuk Pass. [36] We recommend that subsistence be added as an Outstandingly Remarkable Value of the Etivluk, in addition to the other values listed on Table 3-32.

The Utukok -The Utukok River is a major drainage in the Western Arctic. Because of the potential for caribou tourism and hiking, the Utukok is one of the most popular rivers for recreation. Local guiding companies noted in the Fairbanks Public Hearings a marked increase in Utukok River tourism over the past 5 years. The Fairbanks-based company, Arctic Treks advertises their Utukok River rafting trip as containing the following values: "exploring enticing ridges on day hikes, as well as paddling a river run by only handfuls of people." They time their trip to maximize the potential to encounter "huge numbers of caribou as they move through the river valleys after calving, along with the grizzlies, wolves, foxes and wolverines that often follow the herd." [37] Similarly, Jim Morris reported the river corridor to contain "very high archaeological/cultural values and wildlife values." [38] Because of the relatively easy walking, open ridges, wildlife spotting and visibility for hunting and recreation is exceptionally good along the Utukok. This region is the critical calving and post-calving grounds for Alaska's largest caribou herd: the Western Arctic Caribou. Since the BLM acknowledges that the potential for exploration and development of oil and gas resources in this area is "relatively low" it does not follow that the lower portion of the Utukok, which is so incredibly important to wildlife, subsistence (the Western Arctic Caribou herd feeds 43 communities), and recreation.

[26.067] Because of the high value of the Western Arctic Caribou herd to subsistence cultures and the traditional patterns of use along this river, as noted in the National Petroleum Reserve in Alaska 105 (c) Final Study and it is identified as a subsistence use area for the village of Anaktuvuk Pass, [39] Wainwright, [40] and Point Lay [41] subsistence should be considered an outstandingly remarkable value of the Utukok River, [42] in addition to the other values listed on Table 3-32.

[26.068] The Wild and Scenic designation affords interim protection for the rivers like the Utukok for which this Special Area is named. For these reasons, it is of vital importance that the entire Utukok River (inside and out of the Utukok River Uplands Special Area) be unavailable for oil and gas exploration, leasing, and development as well as be recommended for management as a federally-designated Wild River. Alternative B is the only acceptable alternative that will meaningfully protect this river. Under C and D, portions of the Utukok would be available for leasing. Oil and Gas exploration and development activities and permanent facilities on the Utukok would make protecting critical subsistence (due to increased overflights, pollution), recreational (due to increased aircraft overflights), wildlife (from habitat fragmentation, noise, pollution and stress, especially to anadromous fish and calving caribou), scenic and cultural resources (from noisy exploration activities and intrusion of industrial development and infrastructure) impossible.

The Kokolik - Like the Utukok, the Kokolik has also seen a large increase in tourism over the past five years associated with its recreational and wildlife values. Arctic Wild, another experienced, Fairbanks-based guiding company, offers a Kokolik River Caribou Canoe trip. They begin the trip description: "we consider it the best canoeing river in Alaska," and conclude "while not a land of dramatic peak ascents and white water, this is a place of wildlife, beauty and long vistas. This is the best wildlife trip in arctic Alaska." [43] Hiking is described as "wonderful. There are seemingly endless ridges running perpendicular to the river where the

footing is good and the views are unbelievable." Bird and other wildlife watching is of special highlighted significance: "In addition to species common to Alaska's arctic like Lapland longspurs, short-eared owls, and rock ptarmigan we see Asian migrants like blue-throats, wagtails, and bristle-thighed curlews. We see scores of raptors nesting on the river's cliffs and bluffs including white gyrfalcons, peregrines, and rough-legged hawks. Muskox are common, as are bears, marmots, and foxes. Swans and geese are plentiful and the hiking is superb." [44] The Kokolik is included in the subsistence use area for the village of Wainwright [45] (although it is not noted on the map), and Point Lay, so the BLM is right to consider subsistence an Outstandingly Remarkable Value, along with the other values BLM properly listed on Table 3-32. River management should be done in a way to avoids user conflicts into the future as use levels increase. **[26.069]** **Since the western part of the Kokolik is not included in the Utukok River Uplands Special Area, it is especially important that this wildlife mecca be unavailable for oil and gas exploration, leasing, and development as a federally-designated Wild River.**

The Upper Colville- the Colville is the great west-east holding river that drains the Western Arctic and has been the traffic route of people, plants, and animals for millennia. Today, it continues to serve as a passageway for subsistence, travel and customary trade. The Colville's magnificent sloping banks contain numerous ancient camps and settlement sites. It is the type of river that one expects to find mammoth tusks poking out of the banks. In the summer months, the eroding river banks droop with fragrant lupine, and tall bluffs shed rock and fossils into the river with the volume of thunder. In the winter, the Colville is a wide path for snow machines and dog teams. It is an excellent river for recreation. The area of the Colville upstream from Umiat is identified as a subsistence use area for whale, moose, and caribou for the village of Barrow, [47] Nuiqsut [48] (where the subsistence use area extends to the village of Nuiqsut), and Wainwright [49] (the lower Colville) in BLM's maps, and the BLM was right to consider subsistence an outstandingly remarkable value of this river, [50] along with the other listed values The Colville contains key moose habitat [51] grizzly bears, wolves, passerines, and raptors. Its tributaries are renowned for high-density nesting of raptors, including Arctic peregrine falcons, rough-legged hawks (Buteo lagopus), gyrfalcons (Falco rusticolus), and golden eagles (Aquila chrysaetos), all of which will greatly benefit from Alternative B's extension of the buffer zone to 2 miles. The river has been the driving force behind the Colville River Special Area, established in 1977 in recognition of wildlife and natural values.

The Awuna- The Awuna was evaluated in 1977 for possible inclusion into the National Wild and Scenic Rivers System. Inspectors noted then "The single most dominant factor of the trip was the quiet, unpolluted atmosphere that is prevalent in this very sparsely populated country. The only evidence of man was an occasional aircraft overhead and with sufficient water to float a nice wilderness trip could be experienced." [52] As far as wildlife, the expedition noted: "Wildlife observation, especially birds and raptors, was good. Some of the most enjoyable experiences of the trip were associated with the close observation of geese, ptarmigan, and caribou." The Awuna is identified as a partial subsistence use area for Non-Marine Resources for the village of Atqasuk, [53] and the village of Wainwright [54] and the BLM is right to name subsistence as a Outstandingly Remarkable Value, as well as its other values on Table 3-32. **[26.070]** **Under all alternatives, part of the Awuna would be available for leasing. Industrial development is incompatible with maintaining the purposes of Wild and Scenic Rivers and this use must be prohibited. We are also disappointed to see that a portion of the Awuna is not protected as part of the Upper Colville River Special Area as it is an important tributary to the larger river. This makes it even more important to designate the entire Awuna River as a Wild River, so that it receives protection from the harmful impacts on water quality, aircraft overflight, pollution and visual impacts associated with oil and gas exploration and development.**

Carbon Creek- Carbon Creek flows into the Utukok River. In his 1977 trip report from the Bureau of Recreation's evaluation of NPR-A resources, Jim Morris noted "opportunities for getting away from the river and hiking are excellent, particularly along the ridges on the upper part of the river above Carbon Creek." [55] Carbon Creek was noted in the 105(c) Final Study to be a traditional subsistence site. Similarly, Carbon Creek was identified as subsistence use area

for Non-Marine Resources for the village of Atqasuk [56] and Wainwright [57] (although it is not mapped) and the BLM is right to name subsistence as an Outstandingly Remarkable Value of this waterway, along with its other values on Table 3-32, including wildlife given that this tributary to the Utukok River is in the heart of Western Arctic Caribou herd's critical calving habitat. [58]

Driftwood Creek-This creek contains a popular landing strip that is used for caribou viewing and supports essential insect-relief and summer migratory corridors for the Western Arctic Caribou herd. [59] It is a critical access point to the Utukok Uplands area as headwaters tributary to the Utukok River, and BLM should add recreation as an outstandingly remarkable value, in addition to BLM's on Table 3-32.

Nuka River- The Nuka river contains medium density habitat for Moose, [60] provides key insect-relief and summer movement habitat for the Western Arctic Caribou herd, and the BLM is right to name wildlife as an outstandingly remarkable value, as well as scenic values for this headwaters river to the Colville flowing from the DeLong Mountains. [61]

Ipnavik- The Ipnavik is notable in that it hosts high density of moose, and the BLM is right to include wildlife as an outstandingly remarkable value, as well as scenic values of this headwaters of the upper Colville. [62]

Kuna-The portion of the Kuna close to its confluence with the Colville is notable in that it hosts high density of moose, as well as calving and post-calving migratory movements of the Western Arctic Caribou Hers, so the BLM is right to include wildlife as an outstandingly remarkable value, among its other values. [63]

Kiligwa- The Kiligwa is an important tributary of the Colville and part of it occurs within the Colville River Special Area.

Each of these rivers is important in their own right and contains intrinsic values. As a whole system, the tributaries and major drainages comprise one of the last whole and pure watersheds in our world. Inclusion of these rivers in the National Wild and Scenic River System, through designation as "Wild" for these individual rivers is a good and necessary step in preserving this precious balance for the future.

[1] Draft NPR-A IAP/EIS, March 2012, Vol. 1, page 424.
[2] Draft NPR-A IAP/EIS, Vol. 2, page 448.
[3] Helga Eakon. Gates of the Arctic National Park. Subsistence and Gates of the Arctic. http://www.nps.gov/gaar/historyculture/subsistence.htm
[4] Simon Paneak and John Martin Campbell. 2004. In a Hungry Country: Essays by Simon Paneak. Page 26.
[5] Gates of the Arctic National Park, History. Caribou and People. http://www.nps.gov/gaar/historyculture/caribou-and-people.htm
See also Hall, E.S., S.C. Gerlach, and M.B. Blackman. 1985. In the National Interest: A Geographically based study of Anaktuvuk Pass Inupiat Subsistence Through Time. North Slope Borough.
[6] See Draft NPR-A IAP/EIS, Vol. 5, Map 3.3.6-12. https://www.blm.gov/epl-front-office/projects/nepa/5251/35112/36562/Map_3_3_6_12_moose_wolverine.pdf
[7] Wild & Scenic Rivers Act, October 2, 1968, "It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."
[8] Draft NPR-A IAP/EIS. Map 3.3.4-2. Anadromous Waters. https://www.blm.gov/epl-front-office/projects/nepa/5251/35079/36529/Map_3_3_4_2_Fish_Anadromous.pdf. See also Vol. 4, Appendix D, Table D-2.
[9] David Hoffman, David Libbey, and Grant Spearman. 1978. Land Use Values Through Time

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[10] Draft NPR-A IAP/EIS. Volume 2, page 385.
[11] NPR-A IAP/EIS. Map 3.3.6-9 Western Arctic Caribou Herd- Summer Movements. https://www.blm.gov/epl-front-office/projects/nepa/5251/35109/36559/Map_3_3_6_9_WAH_summer_movement.pdf
[12] NPR-A IAP/EIS. Map 3.3.6-8 Western Arctic Caribou Herd- Calving Ground. https://www.blm.gov/epl-front-office/projects/nepa/5251/35108/36558/Map_3_3_6_8_WAH_calving_kernel.pdf
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[27] Draft NPR-A IAP/EIS, Vol. 2, page 448.
[28] Draft NPR-A IAP/EIS, Vol. 2, page 448.
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[Response to 26.001]
Prior to the use of radio-collars, knowledge of caribou ranges was rather vague and could not be objectively defined. The IAP/EIS uses the best available scientific data, collected for over 20 years, to describe caribou ranges. In the future, caribou ranges may expand beyond those observed over the last two decades, but we have no objective way to determine what areas that expansion may involve. Nonetheless, some of the alternatives protect larger areas than those used by caribou during the critical calving and insect relief periods.

[Response to 26.002]
The BLM's authoritative data source for rivers is the USGS' National Hydrography Dataset (NHD). Unless the name in the NHD is unclear (as is the case with the Ublutuoch/Tingmiaqsiugvik River near Nuiqsut), the rivers are labeled with the names used in the NHD dataset. These names correspond to USGS topographic quad maps for Alaska. The loss of clarity and difficulty determining unambiguous Inupiat river names would make adopting this suggestion impractical for the current planning effort.

[Response to 26.003]
The BLM has modified the text to clarify that gravel mines would be prohibited in areas in which new nonsubsistence infrastructure would be prohibited. Permanent pads, roads, or fill qualify as new non-subsistence permanent infrastructure, and thus would be prohibited. The BLM presumes that where land is unavailable for leasing, industry will not conduct seismic exploration. The BLM prohibits wastewater discharges or disposal of domestic wastewater into bodies of fresh, estuarine, and marine water, including wetlands, unless authorized by a State permit. See Best Management Practice A-2.

[Response to 26.004]
This comment is too speculative to warrant further attention, or NEPA analysis. The commenter did not provide any references or data to support this hypothesis and supportive scientific data, inferences, or other references pertaining to this topic are lacking. Lacking information, there is nothing with which to substantiate or evaluate effects, or to determine that effects occur.

[Response to 26.005]
Under Alternative B, BLM analyzed making Kasegaluk Lagoon and Peard Bay, as well as lands one mile inland from the waterbodies, unavailable for leasing and in which new nonsubsistence infrastructure would be prohibited.

[Response to 26.006]
Detailed wildlife information may be found in Chapter 3.3 discussion of biological resources.

[Response to 26.007]
The scope of this plan did not include the designation of wilderness. Volume 1 of the plan describes the research that has been conducted in the NPR-A. The proposed National Landmarks from the 1970s were never accepted as such. The wilderness inventory of the NPR-A is continuously being updated.

[Response to 26.008]
The scenario for development of the discovered oil and gas in the Greater Mooses Tooth Unit is described in Chapter 4, Section titled "Oil and Gas Exploration and Development Activities." Permitting for satellites to Alpine will respond to applications when received and will rely upon the relevant lease stipulations. The NEPA adequacy of the Alpine Satellite Development Plan will be evaluated at the time of application. Note that much of the surface and subsurface relevant to development of GMT-1 and GMT-2 have been conveyed out of federal ownership since completion of the Alpine Satellite Development Plan.

[Response to 26.009]
IAP/EIS language has been revised to make it clear that gravel roads could be developed to link a small number of production pads between nearby fields that share a central processing facility

(see joint development in Chapter 4, Figure title "Hypothetical layout of a joint oil development complex" and Chapter 4, Figure title "Hypothetical layout of joint gas development"). The impacts associated with this type of development is assessed in Chapter 4, Section title "Oil and Gas Exploration and Development Activities."

One of the purposes of this plan is to provide the opportunity to construct necessary infrastructure to support bringing oil and gas resources from the Chukchi Sea to Trans-Alaska Pipeline System and/or a future gas pipeline. This infrastructure may require a road that would link NPR-A to the Dalton Highway area. The IAP/EIS also considered the impacts of a road proposed by the State of Alaska to link Umiat with the Dalton Highway. The IAP/EIS analysis has considered the potential impacts of such roads as well as roads associated with joint development; other roads in NPR-A are not considered reasonably foreseeable.

[Response to 26.010]
Site-specific analysis is appropriate at the time of an application for use of a staging area. The BLM is not evaluating a decision to use the referenced areas in this plan, though some alternatives would prohibit new nonsubsistence infrastructure in the area.

[Response to 26.011]
The IAP/EIS assumes no gravel road construction along major oil and gas pipelines for development within NPR-A. Ice roads/snow packed trails would be used to support construction of projected sales pipelines transporting oil and gas from the respective development complexes in the NPR-A to transmission pipelines east of the NPR-A border. Pipelines would be constructed in winter. The plan, however, does consider the potential impact of a road associated with Chukchi Sea development.

[Response to 26.012]
When compared to the total U.S. emissions of greenhouse gases, each alternative would contribute miniscule amounts of direct emissions to national levels. Moreover, a determination of specific air pollutant emissions and potential impacts cannot be made until site-specific development activities are proposed.

Environmental impacts of greenhouse gas emissions from oil and gas consumption are not effects of the NPR-A planning decision as defined by the Council on Environmental Quality, and thus are not required to be analyzed under NEPA. Greenhouse gas emissions from consumption of NPR-A oil and gas are not direct effects under NEPA because they do not occur at the same time and place as the action. They are also not indirect effects because NPR-A oil and gas leasing and production would not be a proximate cause of greenhouse gas emissions resulting from consumption. Also, because the impacts of consumption are not direct or indirect effects of the proposed action, a cumulative impact analysis would not reveal an incremental effect attributable to the proposed NPR-A leasing decision.

For examples of best management practices which would protect air quality, see Stipulation/BMP A-9 and A-10.

[Response to 26.013]
For a discussion of quantitative analysis of air impacts, see Appendix H. The air quality analysis is sufficient; additional air quality analysis will occur at the project development stage.

[Response to 26.014]
Please see Chapter 4, Environmental Consequences and Cumulative Effects on the Environment, for Air Quality and Climate. For a discussion of quantitative analysis of air impacts, see Appendix H.

[Response to 26.015]
Improvements in air pollution control technology would help reduce emissions as would emission reductions due to overall declining production on the North Slope. Each proposed production facility will be required to disclose its potential air quality impacts through site-

specific NEPA analyses and to demonstrate compliance with applicable air quality requirements.

[Response to 26.016]
Impacts on wilderness characteristics from Alternatives C and D are discussed in sections 4.6.18 and 4.7.18, respectively, in the Final IAP/EIS.

[Response to 26.017]
The impacts of development of a road to Umiat, and its potential impacts in NPR-A, are properly analyzed in the cumulative impact analysis. The analysis acknowledges that if a road from the coast was built to Umiat, it, in combination with the road to Umiat, could have additional impacts in NPR-A.

[Response to 26.018]
The analysis of cumulative impacts is organized by resource or use and potential impacts are described to the extent that the existing literature and professional judgment of the authors permit. The analysis of cumulative impacts identifies what impacts could flow from specific developments to the extent that such impacts can be isolated. Impacts from future actions considered in the cumulative impact analysis will necessarily be better understood and analyzed when specific proposals are developed.

[Response to 26.019]
The cumulative impact analysis in the IAP/EIS provides suitable specificity of analysis. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure.

[Response to 26.020]
The BLM considers performance-based stipulations and best management practices (in contrast to the prescriptive stipulations of the 1998 Northeast NPR-A IAP/EIS) to be a strength of the current and recent IAPs, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques. In addition, federal law and regulations have evolved to better protect resources.

[Response to 26.021]
Under Chapter 4, Section title "Oil and Gas Exploration and Development Activities," the IAP/EIS does not assume a road to Umiat is built. The IAP/EIS in the cited section only hypothesizes that "if a road is built to Umiat from the Dalton Highway," it could be used to support development in southern NPR-A.

The State's road proposal to Umiat is undergoing NEPA analysis. The potential routes of the road are described in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development."

[Response to 26.022]
Cumulative impacts are described to the extent that the existing literature and professional judgment of the authors permit. The analysis of cumulative impacts identifies what impacts could flow from the specific developments to the extent that such impacts can be isolated. Impacts from future actions from future actions considered in the cumulative impact analysis will necessarily be better understood and analyzed when specific proposals are developed. Discussion of the impacts of a potential road to Umiat on birds other than special status species is provided in section 4.8.7.8 and impacts on terrestrial mammals can be found in section 4.8.7.9.

[Response to 26.023]
Given what is known about the spring and autumn migratory paths of the Teshekpuk (TCH), Central Arctic (CAH) and Western Arctic (WAH) caribou herds, infrastructure in the vicinity of

the proposed Umiat road would have little to no effect on animals of the WAH and would be on the periphery of the TCH movement area. Portions of the proposed road and future associated pipelines could bisect CAH movements. Thus the DEIS stated the road "could potentially affect some individuals of each of the herds." Nonetheless, multiple studies have shown that properly constructed roads and pipelines have not had significant effects on caribou movements. One study of WAH collared animals in the vicinity of the Red Dog Mine road has shown that some groups have turned back from the road, but those data have not been analyzed as a whole to suggest overall effects on the herd.

The statement that buried pipelines have no effect was meant literally to refer to the buried pipeline itself. The EIS has been revised to add the potential for disturbance from pipeline monitoring traffic. The BLM maintains that the potential future actions analyzed would not likely present a long-term, cumulative effect with the actions proposed in the NPR-A.

[Response to 26.024]
The impact analysis in the Final IAP/EIS provides suitable specificity of analysis. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure.

[Response to 26.025]
The discussion in the cumulative impact discussion of sociocultural systems relative to a potential Chukchi Sea development has been modified. Additional discussion of the potential development, based on available data can be found in the discussion of Reasonably Foreseeable Future Exploration and Development near the beginning of the cumulative impact portion of Chapter 4.

[Response to 26.026]
The BLM analyzed a very large oil spill scenario appropriate for the analysis of onshore spills from a loss of well control within NPR-A. Flow rates for wells in NPR-A are not expected to be of the magnitude of MC 252 well which was estimated to flow up to 62,000 barrels of oil per day (McNutt et al. 2011). Loss of well control operations at surface wells on land in NPR-A are not expected to be as complex as operations in 5,000 feet of water. The highest flowing well at the Alpine field, which is the nearest analogy, was approximately 11,500 barrels of oil per day and the average well was approximately 4,500 barrels of oil per day. Alpine wells are horizontal wells which are also choked and would restrict uncontrolled flow should a loss of well control occur. The specific well configuration must be considered and further details can be analyzed once a development plan is submitted and specific well configuration details are available. In some cases, for NPR-A, wells are not estimated to flow and will likely need artificial lift to be produced. Section 4.11.4 discusses the effects of a low-probability very large oil spill.

[Response to 26.027]
While the amount of development activity is not projected to be precisely proportional to the amount of oil and gas to be recovered, it is a reasonable assumption that there is a direct relationship between the amount of petroleum resource to be extracted and the amount of development and that if lands with more oil and gas potential are made available for leasing that more oil and gas could be discovered and ultimately recovered.

[Response to 26.028]
The scenario for development of the discovered oil and gas in the Greater Mooses Tooth Unit is described in Chapter 4, Section title "Oil and Gas Exploration and Development Activities." Permitting for satellites to Alpine will respond to applications when received and will rely upon the relevant lease stipulations. The NEPA adequacy of the Alpine Satellite Development Plan will be evaluated at the time of application. Note that much of the surface and subsurface relevant to development of GMT-1 and GMT-2 have been conveyed out of federal ownership since completion of the Alpine Satellite Development Plan.

Unit plans of development (PODs) are not routinely made available to the public by the BLM. Public disclosure decisions are made on a case-by-case basis according to BLM policy and Freedom of Information Act (FOIA) regulations (43 CFR Part 2, Subpart C).

The Bear Tooth Unit is still in the Initial Development Obligation stage. According to the unit agreement, ConocoPhillips Alaska, Inc. (CPAI) will not file its first annual plan of development (POD) until an obligation well has been drilled that meets the Productivity Criteria as defined in the unit agreement. Regarding the Greater Mooses Tooth Unit, CPAI conducted no drilling in 2011-2012. The next POD will be filed in late 2012.

[Response to 26.029]
Site-specific analysis is appropriate at the time of an application for use of a staging area. Such analysis is not appropriate at this time as the agency is not evaluating a decision to use the areas.

[Response to 26.030]
Actual numbers of aircraft flights are not possible to predict even for a single project, much less prior to the discovery of oil and gas and the design of infrastructure. The estimates provided give examples of traffic for various stages of development.

[Response to 26.031]
The flight information provided are based on actual experience or are reasonable projections of potential use in the NPR-A, perhaps erring on the high side given that most projected development in NPR-A would be smaller than existing infrastructure.

[Response to 26.032]
The flight information provided are based on actual experience or are reasonable projections of potential use in the NPR-A, perhaps erring on the high side given that most projected development in NPR-A would be smaller than existing infrastructure.

[Response to 26.033]
Text has been added to describe 4-D seismic.

[Response to 26.034]
The statement is not contradicted by the figure. One survey crew conducted two surveys.

[Response to 26.035]
The precise number of vehicles can vary. For analysis purposes, the acreage impacted is of greater importance.

[Response to 26.036]
The text has been modified to clarify recent survey activity.

[Response to 26.037]
The text on the 29 exploration and delineation wells in Chapter 4 of the IAP/EIS has been modified. Five of the six discoveries are located in the Greater Mooses Tooth Unit which required 15 exploration/delineation wells. This is an average of about 3 wells per discovery.

[Response to 26.038]
The IAP/EIS provides several measures of the winter season, including a range of from 103 to 194 days and an average of 134 days for recent years.

[Response to 26.039]
Maps depicting locations of undiscovered oil and gas accumulations, even for illustrative purposes, would be misleading. The Alpine Satellite Development Plan (ASDP) EIS's analysis is only applicable to applications for permits related to that development. The full-field development scenario in the ASDP EIS was created for purposes of analysis in that EIS. It is not appropriate for the current NPR-A plan.

[Response to 26.040]
Hypothetical development facility reductions from those described in the Northeast NPR-A

Supplemental IAP/EIS (2008) is based primarily on the 2010 reduction in USGS assessed technically recoverable conventional oil resources, the associated number of oil accumulations in the various size classes as defined by the USGS, and the USGS's 2011 report on economically recoverable oil and gas resources in NPR-A. The development scenarios, including infrastructure between oil and gas fields and zone hubs, depicted in the cited figures in section 4.2.1.2 are consistent with the USGS's analysis. Text has been added to that section to describe zone hubs.

[Response to 26.041]
The text has been modified to indicate that development generally would not be connected to areas outside of NPR-A by road. Note, though that in the cumulative analysis, the BLM acknowledges that a road across NPR-A may be a part of infrastructure associated with Chukchi Sea development.

[Response to 26.042]
The BLM consulted the USGS about an appropriate North Slope analog from which a hypothetical joint oil development complex or a hypothetical stand-alone oil facility could be conceptualized. The USGS suggested the Nikaitchuq oil field as a analog and the BLM deems this as a reasonable representation for analysis purposes.

[Response to 26.043]
The BLM discourages the use of solid-fill causeways, preferring instead alternatives such as onshore directional drilling, elevated structures, or buried pipelines. Lease Stipulation E-3 prohibits the construction of causeways, docks, artificial gravel islands, and bottom-founded structures in river mouths and deltas, and the construction of artificial gravel islands and bottom-founded structures in active stream channels. If any such structures were approved, they would be designed, sited, and constructed in a way meant to prevent large changes in nearshore hydrography and maintain free passage of marine and anadromous fishes. Additionally, a monitoring program would be required to evaluate water quality and fish passage.

[Response to 26.044]
The BLM does not assume that the Point Lonely site will be appropriate as a staging area, but points out that it has some access advantages. Point Lonely has been used in the past for staging.

[Response to 26.045]
Site-specific analysis is appropriate at the time of an application for use of a staging area. Such analysis is not appropriate at this time as the agency is not evaluating a decision to use the areas.

[Response to 26.046]
The State of Alaska has proposed a road to Umiat and an environmental impact statement is being drafted. As such, it is reasonably foreseeable, and is properly analyzed, acknowledging several different possible routes, in the cumulative impact analysis. The statement on the cited page makes no assumption that the road would be built, but points out a possible use of the road if it is built.

[Response to 26.047]
Gravel sources are recognized in the IAP/EIS as a scarce commodity within the NPR-A. Investigations to identify gravel sources in the NPR-A, including suitable quarry bedrock, have not been conducted for undiscovered oil and gas, but presumably would be initiated as discoveries of commercially recoverable oil and gas are confirmed. It is also likely that some gravel sources will be used for more than one oil or gas development project.

[Response to 26.048]
Gravel roads could be developed to link production pads between nearby fields that share a central processing facility (see Chapter 4, Figure title "Hypothetical layout of a joint oil

development complex" and Chapter 4, Figure title "Hypothetical layout of joint gas development") and which represent hypothetical joint development.

The amount of gravel required for these connecting roads, as well as the number of gravel borrow pit acres, is tabulated for impact analysis purposes in Chapter 4, Table title "Estimated area of surface disturbance and amount of gravel needed for a hypothetical joint oil development complex located within economic zones 110 and 120" and in Chapter 4, Table title "Estimated area of surface disturbance and amount of gravel needed for a hypothetical joint gas development."

[Response to 26.049]
The hypothetical layout of joint oil development (see Chapter 4, Figure title "Hypothetical layout of joint gas development" and Chapter 4, Table title "Estimated area of surface disturbance and amount of gravel needed for a hypothetical joint gas development") assumes that there are up to 15 miles between accumulations and 2 to 5 miles between in-field production pads. These distances are within drilling limitations experienced on the North Slope and, therefore, deemed reasonable for analysis purposes.

[Response to 26.050]
The State of Alaska regulates drilling wastes. See Alaska Administrative Code Chapter 60, particularly 18 AAC 60.430 Drilling Waste.

[Response to 26.051]
The IAP/EIS, based upon the USGS's economic analysis of developing undiscovered oil in NPR-A, projects that seawater would be procured from the same source as has been used for current and past development in the Prudhoe Bay-Kuparuk area.

[Response to 26.052]
The considered the use of fracking for recovery of oil and gas from source rocks. A discussion of BLM's rationale for not analyzing the development of unconventional oil and gas development from source rocks in NPR-A is provided in section 4.2.1.2 in the assumptions for resource potential and petroleum-related activities.

[Response to 26.053]
Addressing additional information on TAPS throughput rates is beyond the scope of this IAP/EIS. All NPR-A development scenarios assume that the TAPS would continue to operate and carry North Slope oil production for decades more into the future. As noted in the IAP/EIS, efforts could include substantial design modifications to handle low (less than 350,000 barrels of oil per day) flow rates.

[Response to 26.054]
The State's road proposal is undergoing NEPA analysis. The potential routes of the road are described in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development."

[Response to 26.055]
The figure has been revised.

[Response to 26.056]
Description of development in the Greater Mooses Tooth Unit is provided in Chapter 4, Section title "Oil and Gas Exploration and Development Activities" and is sufficient for analysis purposes.

[Response to 26.057]
Chapter 4, Section title "Oil and Gas Exploration and Development Activities" includes language nearly identical to that quoted from the Northeast NPR-A Supplemental IAP/EIS. The language appeared in the Draft IAP/EIS on page 42.

[Response to 26.058]
The IAP/EIS properly provides analysis of the economic impact of development in the NPR-A for

each alternative. While bridges and other infrastructure are expensive, their cost is factored into the determination of the amount of economically recoverable oil and gas.

[Response to 26.059]
The State's road proposal is undergoing NEPA analysis. The potential routes of the road are described in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development."

[Response to 26.060]
Estimates of aircraft use sufficient for impact analysis are provided earlier in Chapter 4, Section title "Oil and Gas Exploration and Development Activities." Additional aircraft use analysis, including comparison between any alternatives that include or exclude a road paralleling the pipeline, would be conducted as part of the analysis of a specific application.

[Response to 26.061]
Although no hypothetical field layout maps for these units and the Umiat area are included in the IAP/EIS, estimates of the surface disturbances and amount of gravel required for projected satellite development are provided for impact analysis purposes.

See Chapter 4, Table title "Estimated area of surface disturbance and amount of gravel required for projected satellite development facilities of discoveries in the Greater Mooses Tooth and Bear Tooth units."

See also Chapter 4, Table title "Estimated area of surface disturbance and amount of gravel required for a projected satellite oil development near Umiat."

[Response to 26.062]
The BLM does not have data to suggest the dramatic rise of recreational activity in the NPR-A. Due to the remoteness that would make it appealing, the financial cost to recreate is high. The author of this section floated the Utukok with coworkers for 10 days in the summer of 2011 and never saw another human being.

[Response to 26.063]
The IAP/EIS considers a range of alternatives that protect subsistence activities in the area of these rivers, including designation as components of the national wild and scenic rivers system.

[Response to 26.064]
Some of river names were inadvertently left off of some alternative maps in the Draft IAP/EIS; this has been corrected in the Final IAP/EIS. The BLM's authoritative data source for rivers is the USGS' National Hydrography Dataset (NHD). Unless the name in the NHD is unclear (as is the case with the Ublutuoch/Tingmiaqsiugvik River near Nuiqsut), the rivers are labeled with the names used in the NHD dataset. These names correspond to USGS topographic quad maps for Alaska.

[Response to 26.065]
The BLM was unable to find documentation sufficient to establish the Nigu as an outstandingly remarkable subsistence area.

[Response to 26.066]
The BLM was unable to find documentation sufficient to establish the Etivluk as an outstandingly remarkable subsistence area.

[Response to 26.067]
Subsistence was added as an outstandingly remarkable value for the Utukok.

[Response to 26.068]
The range of alternatives does include consideration of the Utukok for management as a federally-designated Wild River.

[Response to 26.069]
The range of alternatives does consider the Kokolik for designation as a component of the national wild and scenic rivers system.

[Response to 26.070]
It appears the commenter is referring to the portion of the lower Awuna that was found not suitable for WSR designation in the Northwest NPR-A IAP/EIS ROD. The decision not to reconsider the earlier nonsuitability decision was within the discretion described in the BLM Manual (MS-6400 4.1.A, BLM 2012) and is discussed in section 2.4.5.

COMMUNICATION NUMBER 27
Randall Hagenstein, Alaska State Director
The Nature Conservancy in Alaska

June 8, 2012

Bud Cribley, State Director
Alaska State Office
Bureau of Land Management
222 West Seventh Avenue – Mailstop 13
Anchorage, Alaska 99513

SUBJ: NPR-A Integrated Activity Plan
Draft Environmental Impact Statement

Dear Director Cribley:

Thank you for the opportunity for The Nature Conservancy to provide input to the recently released Integrated Activity Plan Draft Environmental Impact Statement for the National Petroleum Reserve – Alaska (NPRA). The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends. We are a science-based organization that brings a collaborative approach to solving the pressing conservation challenges that confront all of us. We have operated across Alaska through an Alaska Chapter that was formed in 1988.

The Nature Conservancy has been working in arctic Alaska for more than a decade. In 2004, we completed the first comprehensive biodiversity analysis of the three ecoregions that span the North Slope. Subsequent to the ecoregional assessment, The Nature Conservancy and the Native Village of Wainwright jointly developed a traditional use area conservation plan for the area used by Wainwright residents for subsistence and other traditional uses. The plan integrated traditional knowledge and use patterns with state of the art conservation planning methods. Finally, over the past two years, we have worked with Audubon Alaska and The Wilderness Society to model potential changes in caribou habitat use across a range of climate change and development scenarios (the results of which are being provided to you as an attachment to comments submitted by the Wilderness Society). We appreciate the opportunity to bring our perspectives based on this history in the region to inform and support the Integrated Activity Plan.

We appreciate the comprehensive nature of the Integrated Activity Plan and commend your efforts to bring an extensive body of research and analysis to bear to evaluate and plan across this vast 23 million acre Reserve. As detailed in the Integrated Activity Plan, the National Petroleum Reserve – Alaska was established to meet strategic oil and gas energy needs while ensuring the maximum protection of significant surface values. The Nature Conservancy understands the need and challenge of finding this balance. We know that this area has oil and gas reserves, though we also note that the estimates have been significantly reduced as additional data has come to light. We also recognize that the National Petroleum Reserve – Alaska provides the only overland route between the potential offshore reserves in the Chukchi and existing oil transportation infrastructure.

We also note that the National Petroleum Reserve – Alaska is a nationally and globally significant place. As the largest single holding of federal land in the United States, it contains one of the truly large intact landscapes with wilderness characteristics in the country. The North Slope has the world's largest arctic wetland complex, the vast majority of which is within the boundaries of the Reserve. There are seven Important Bird Areas identified within the boundaries of NPRA, including two recognized as having global significance. Teshekpuk Lake and surrounding wetlands is the most important brant and goose molting habitat in the circumpolar north. NPRA also includes identified critical habitat for a number of species listed as threatened or endangered under the U.S. Endangered Species Act. These are not lands that

nobody wanted; this is a vast, extraordinary landscape with multiple globally significant biological values.

Finally, NPRA provides for traditional uses by the Inupiat People of the North Slope with documented use by the communities of Point Lay, Wainwright, Atqasuk, Barrow, Nuiqsut, Anaktuvuk Pass and perhaps other communities. Harvest and sharing of fish, animals, and plants is so woven through the culture of the Inupiat People as to be inseparable. The presence of traditional people living in unbroken and close association with the land and water is a globally rare cultural situation.

For the reasons above, I strongly encourage adoption of Alternative B as the clear choice to both promote energy development and protect the globally significant surface values and to meet the clear dual mandate of the National Petroleum Reserves Production Act.

Additional input and rationale is provided below:

Significant biological features needing protection:

The Integrated Activity Plan does a good job identifying the areas in NPRA with exemplary surface values. These include:

- Teshekpuk Lake and surrounding wetlands
- The Dease Inlet area and wetlands to the east of Dease Inlet
- Caribou calving areas in the Utukok Uplands
- The Colville River corridor
- Kasegaluk Lagoon

Each of these areas has been identified in previous plans and (in some cases) legislation and by multiple federal administrations as having extraordinary surface values. Alternative B is the only alternative presented that fully protects these areas. We also note that the Western Arctic Caribou Herd Working Group representing subsistence users from northwest Alaska also supports Alternative B as the only alternative that fully protects the important core of caribou habitat.

Combined cumulative effects analysis of climate change and oil and gas development:

The Integrated Activity Plan correctly identifies changes linked to a changing climate and oil and gas development as the dominant drivers of change in NPRA. These effects include both projected changes in the future as well as documented changes over recent decades for both climate-related changes and oil and gas development. Although both climate and energy development were treated in the cumulative effects analysis, the combined and synergistic effects were touched on only lightly, and the implications of those combined effects on surface resources was minimal.

We know, for example, that a changing climate has been driving change geomorphology, vegetation, and hydrology. Shorelines are eroding, shrub vegetation cover has been increasing, wetlands have been draining and drying. And these changes are projected to continue and all have implications for species that use the NPRA. The cumulative footprint of oil and gas development has also been growing and is projected to keep growing. And this will have implications for the species that use the NPRA. How are the combined effects of climate change and energy development going to change habitat capability for different species? How should land management change to reflect both the likely and hard-to-predict changes? These are hard questions, perhaps without a clear answer today. Analyses by The Wilderness Society (that they are including as an attachment to their comments) on habitat selection by caribou provide one example of a tool that can be useful in evaluating cumulative changes from multiple stressors.

Given that this part of the globe has experienced and is expected to continue to experience the fastest pace of climate change, the most precautionary approach to management makes the most sense. Again, this argues for adoption of Alternative B.

Implementation of a mitigation hierarchy at scale to achieve lasting, tangible results:

We commend BLM for the considerable attention to on-site best management practices that would avoid or minimize adverse environmental impacts. Less attention has been focused in the Integrated Activity Plan, however, on how BLM will resolve unavoidable impacts to natural resource values. Oil and gas development in NPRA will eliminate habitat and displace species, as well as eliminate most other uses of BLM-administered lands. As a result, on-site mitigation to offset habitat loss/fragmentation and other impacts is largely impossible, leaving off-site mitigation the primary (if not the only) option. While we recognize that the purpose of Integrated Activity Plan is to proactively guide infrastructure away from sensitive natural resources, we believe it is important for BLM to develop and implement a clear and comprehensive plan for unavoidable impacts to sensitive or regionally important natural resources. The need for an east-west corridor across the NPRA will add to this need.

[27.001] We recommend that BLM create a mitigation framework at a regional scale to ensure mitigation efforts yield lasting, tangible results, including an offset program that compensates for loss of high ecological value habitat with like habitat off-site. One rationale for a regional framework is the leverage that can be gained by combining offsets for unavoidable impacts from energy development projects with those from other infrastructure projects. The potential to combine mitigation needs under one regional plan will make mitigation efforts less costly and more effective than a project by project approach that typically results in a patchwork of small mitigation sites that are of insufficient scale and connectivity to be ecologically viable or to fully offset impacts over time.

By regional scale we mean a scale such as ecoregions, for example, which share similar plant communities and species and, thus, make like for like habitat compensation more straightforward and increase the likelihood that sufficient wildlife habitat remains intact. This approach can benefit from currently-available regional landscape-scale ecological assessments, such as BLM's rapid ecoregional assessments, state wildlife action plan, or The Nature Conservancy's ecoregional and other regional-scale conservation assessments and plans.

[27.002] To ensure unavoidable impacts are fully offset, the Conservancy recommends that BLM establish an off-site mitigation program that, in addition to the potential for acquisition of private lands, allows mitigation on BLM-administered lands where impacts cannot be addressed through acquisition and long-term management of private lands; allows "mitigation banking" on BLM-administered lands where conservation designation and/or management can achieve mitigation needs/outcomes relative to specific impacts to habitats and associated species; ensures adequate funding over time to achieve mitigation outcomes; creates third party-managed endowments of mitigation funds to manage and direct mitigation investments and activities; and ensures monitoring and adaptive management to ensure mitigation is adequate relative to impacts over time. Below we outline additional specifics on the elements of a regional mitigation plan.

Elements of a Regional Mitigation Plan

[27.003] An example of a regional mitigation plan to offset unavoidable impacts would encompasses a robust compensatory program with the following six elements:

1. An ecological baseline upon which unavoidable impacts are assessed. What is the current ecological status of the landscapes to be developed? What is the habitat quality and level of intactness, where do the species occur and what is their population status and viability? What species are rare, sensitive, endemic, threatened, endangered? What are the aquatic, surface water and groundwater resources and what is their status? Where are the wildlife migratory corridors, where is connectivity of habitats critical in the face of climate change? What ecological trends are underway and how do we expect them to impact species and habitats? The information and data to inform these and other questions form the ecological baseline from which to assess the impacts, both site specific and cumulative, from energy development.

2. A mechanism to assess and quantify unavoidable impacts over the life of the impacts. There is a growing body of work to develop methodologies to assess impacts from development. BLM

has participated in the development of several, and a wide array created by BLM, other federal and state agencies, academia, consultants, etc., have been used to assess impacts on BLM-administered lands. Whatever methodology is selected, it should be transparent and based on best available scientific techniques. It should capture impacts beyond those to federal and state ESA-listed species, BLM Species of Concern and Sensitive Species, and habitats protected under the Clean Water Act. It should also capture cumulative impacts, and the temporal nature of impacts, i.e. over the life of the impact (likely in perpetuity).

3. A methodology to translate the impacts into dollars, i.e. mitigation investments – including sufficient funding to manage and monitor the mitigation investments. Similar to (2.) above, extensive work has gone into and continues to develop methodologies to translate ecological impacts into dollars or mitigation investments and actions. Again, transparency and consistency in the use of the methodology is important. Importantly, the costs of assessing the impacts, and the monitoring and managing the mitigation investments over the life of the impacts needs to be included in the cost of mitigation, and thus the amount of mitigation investment that the project proponent is responsible for. However, the costs of mitigation cannot be so high, or unreasonable, that development cannot occur – a key facet is to avoid impacts to areas that are "unmitigatable," i.e. ecological resources that cannot be replaced or are extremely rare, or where the impacts are so extensive as to drive the costs of mitigation to a level beyond a reasonable level.

4. A structure to hold and apply mitigation investments. Given BLM cannot hold mitigation funds, a structure such as a 3rd party arrangement with fiduciary responsibility (and demonstrated fiduciary experience) should be implemented to hold, manage and allocate mitigation investments. Structures should be regionally/landscape or state based to ensure mitigation investments are responding to impacts on the specific landscape being impacted. Structures should also include representation by agencies such as BLM, Alaska Department of Fish and Game, and U.S. Fish and Wildlife Service. Involvement by key stakeholders in an advisory and oversight role, i.e. counties, conservation community, industry, sportsmen/recreation, etc., would also be important to the long-term success of a mitigation program.

5. A prioritization, e.g., conservation plan, as to where and how mitigation investments should be made. Where and how should mitigation investments be used to ensure the highest return on investment? What "tools" should be used to implement mitigation, i.e. land acquisition, withdrawing BLM-administered lands from other uses, changing land designations or uses, restoration, mitigation banks, etc. How are conservation priorities established, especially relative to potential impacts? At a minimum, we recommend BLM develop a regional conservation plan, such as at an ecoregional scale as described above. Plans should be driven by the best data as the basis for establishing conservation priorities. Conservation plans should seek to prioritize actions to address conservation priorities that achieve the best conservation return on investment.

6. Monitoring to ensure mitigation investments are adequate relative to impacts over the life of the impacts. Monitoring and adaptive management are key to a successful mitigation program. We recommend the establishment of an adaptive management program (i.e. specifically implement AIM across the region) with long term monitoring and assured funding from project proponents for the life of the project.

Thank you again for the opportunity to provide input to the Integrated Activity Plan DEIS for the NPRA.

Sincerely,
Randall H. Hagenstein
Alaska State Director

[Response to 27.001]
Offsite mitigation is a viable means of mitigating impacts. Development of offset mitigations, however, are best done as a result of impacts identified for specific projects.

[Response to 27.002]
Offsite mitigation is a viable means of mitigating impacts. Development of offset mitigations, however, are best done as a result of impacts identified for specific projects.

[Response to 27.003]
In the authorizing/NEPA process for on-the-ground activity or development, the BLM will develop appropriate requirements, including project-specific monitoring to be carried out as a condition of obtaining subsequent BLM authorizations. See sections 2.3.2.2 and 2.5. Detailed assessment and mitigation of impacts such as described in this comment are best developed in response for a proposal of site-specific development.

COMMUNICATION NUMBER 28
Nicole Whittington-Evans, Alaska Regional Director
The Wilderness Society

On behalf of:
Friends of Alaska Wildlife Refuges
Alaska Wilderness League
Natural Resources Defense Council
Northern Alaska Environmental Center
Sierra Club
The Wilderness Society
World Wildlife Fund

Mr. Bud Cribley, BLM State Director
NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

June 15th, 2012

Re: Draft NPR-A Integrated Activity Plan Environmental Impact Statement

Dear Mr. Cribley:
Thank you for the opportunity to provide comments on the Draft National Petroleum Reserve – Alaska (the Reserve) Integrated Activity Plan and Environmental Impact Statement (the Draft Plan) prepared by the Bureau of Land Management (BLM). Please accept these comments submitted by The Wilderness Society on behalf of the following groups: Friends of Alaska National Wildlife Refuges, Alaska Wilderness League, Natural Resources Defense Council, Northern Environmental Center, Sierra Club and World Wildlife Fund.

TWS's mission is to protect wilderness and to inspire Americans to care for our wild places. We have approximately 500,000 members and supporters nationwide, all of whom share an interest in how BLM lands in the western Arctic are managed. TWS seeks to protect the unparalleled ecological and subsistence resources within the Reserve - the largest federal public land management unit in the United States - and we are committed to helping BLM implement strong, biologically-based decisions that govern the protection of the special values of this area.

EXECUTIVE SUMMARY

TWS and the undersigned organizations appreciate the excellent and extensive work BLM has undertaken in the Draft Plan. For the technical reasons described in these comments, including the comparatively small amount of oil and the likelihood of long-term stranded gas in the Reserve, we strongly support full implementation of Alternative B. Alternative B would protect virtually all the key caribou calving, shorebird, and waterfowl habitat in the Teshekpuk Lake Special Area, as well as other Special Areas throughout the Reserve. Protecting the extraordinary values in and around the Teshekpuk Lake Special Area as well as other Special Areas within the Reserve is necessary to achieve balance in managing these important lands.

The following is a brief summary of our recommendations. We urge BLM staff to review the full text of the comments below to respond to our concerns and to the complete recommendations.

Recommendations:

1. Adopt Alternative B as BLM's preferred alternative in the Final Plan as it:
a) meets the requirements to provide maximum protection for the existing and proposed expanded Special Areas for caribou, migratory birds, marine mammals, and other fish and wildlife. Maximum protection can only be met by making areas unavailable for leasing rather than by relying on surface protection requirements;

b) meets the requests of local Arctic communities, as in the resolutions of the Western Arctic Caribou Herd Working Group and that of many other local community entities and tribes representing 90 communities, to protect important subsistence resources; and,
c) provides meaningful, administrative protections for the highest-value ecological areas in the Reserve;
d) establishes meaningful protection for high-ecological-value habitat on a scale that provides sufficient opportunity for species adaptation and resiliency in a warming Arctic climate.
Alternative B best meets the intent and requirements of the Naval Petroleum Reserves Production Act for maximum protection of Special Areas and values of the Reserve, including Alternative B's recommendations for Wild and Scenic River designation for the twelve rivers identified. Importantly, it would meaningfully protect the western Arctic's most significant ecological resources, ensuring ecosystem health and wildlife populations for the life of the plan.

2. To present a coherent and legally-supportable management approach to the Special Areas, the Final Plan should incorporate standalone sections for the Special Areas, discussing the overriding goal of designation and management, detailing the specific values that will be protected, and setting out the specific management prescriptions that apply.

3. Enlarge the existing Special Areas and create a new special area, the Peard Bay Special Area, as the expansions will provide better protection for scientifically documented important wildlife habitats, such as habitat for: Teshekpuk and Western Arctic caribou herds, shorebirds and waterfowl; adequate connectivity and buffer zones to protect riparian and upland habitats and species; as well as adaptation and resiliency for species and habitats as they are impacted by a changing climate. These expanded Special Areas also better meet the requirements in the Naval Petroleum Production Act to provide maximum protection for the Special Areas and the special values of the Reserve. Moreover, BLM should expand the values included for Special Areas, as discussed in Section IV.C.

4. We recommend that all Special Areas in Alternative B categorized as "unavailable for leasing" remain unavailable for leasing in the Final Plan in order to achieve the requirements in the Naval Petroleum Reserves Production Act to provide maximum protection for these areas and their special values.

[28.001] We further recommend that "unavailable for leasing" receive a full definition for this management allocation as discussed in the Background section, including the definition's provisions regarding prohibited infrastructure as shown on Map 2-2. We urge that as part of the maximum protection standard for lands unavailable for leasing, that it be made clear that this designation's provisions are not subject to waiver, exception, or modification.

[28.002] 5. For the six areas identified in the 1978 inventory of Reserve areas with outstanding wilderness characteristics, BLM should incorporate specific discussion of this resource, consider a range of management that includes protection of wilderness characteristics, and incorporate an analysis of the benefits of protection as part of the Final Plan. For lands that BLM is not managing for wilderness characteristics, BLM should ensure that this resource is evaluated and protection considered prior to taking any action that could damage it.

[28.003] 6. The Final Plan should take a harder look at how development likely will occur under Alternatives A, C and D in areas delineated as the Teshekpuk Lake Special Area/Unavailable for Leasing under Alternative B. This includes providing an analysis of what the impacts would be should the assumptions discussed in section II.E. not prove true and more comprehensive justifications for the assumptions contained in the Draft Plan. **[28.004]** Additionally, because habitat similar to what female caribou appear to have preferred for the past 6 years or more does not occur in similar concentrations elsewhere within the Reserve, we request that BLM address this important point in the Final Plan as a benefit provided by Alternative B and an important limitation of Alternatives A, C and D.

7. The Lease Stipulations/Best Management Practices that apply to key wildlife and fish habitat (K Stipulations) should be strengthened across all alternatives in the following ways:

- Roads should be explicitly prohibited outside of oil and gas fields.
- Exception clauses should not be permitted.

[28.005] 8. BLM should provide estimates of undiscovered conventional oil for each alternative using $125 per barrel oil as the market price, and use this information in its comparison of the various alternatives. BLM could also analyze the impacts of the $180 per barrel figure.

[28.006] 9. BLM should eliminate its use of the term "gathering line" in the Final Plan and instead use the pipeline classification methodology used by the state of Alaska. Additionally, given the high rate of spillage from three-phase lines and produced water, BLM should:
- Require as a Best Management Practice separation of oil, gas, and water at each well-pad.
- Develop stringent BMPs for produced water pipelines.

10. BLM needs to address the missing oil and gas issues identified in section IV. J. in the Final Plan.

11. A vigilant science-based monitoring system should be set out in the Final Plan in order to address unforeseeable shifts to ecosystems within the Reserve. Additionally, we recommend an approach for assessing risk in the Reserve as well as an approach for management of that risk by BLM to comply with its legal obligations under various statutes. Furthermore, the Final Plan should adequately address greenhouse gas emissions, as well as all other potential sources of air pollution from activities that may take place in the Reserve.

12. If there is to be a trans-Reserve pipeline, that pipeline should not have an accompanying road and this should be a strict prohibition in the Final Plan.

13. BLM should be required to complete an additional Environmental Impact Statement before shale oil development begins in the Reserve.

14. None of the alternatives in the DEIS should consider hard rock mineral or coal exploration and development. It is explicitly prohibited by the Naval Petroleum Reserves Production Act. [1]

I. INTRODUCTION

TWS and the undersigned organizations applaud BLM for moving forward with an Areawide planning process for the Reserve and for considering all of the values of the Reserve in the Draft Plan. Many of our organizations have long advocated for such a comprehensive and new management plan for the entirety of the Reserve, and we are very encouraged that the BLM is considering the Reserve comprehensively so a proper balance of uses can be analyzed and obtained throughout the entire land management unit. TWS provided substantive stand-alone, technical scoping comments for this Areawide planning process, as well as joined all of the organizations represented on this letter in providing extensive coalition scoping comments for the plan, and we hereby incorporate both sets of these scoping comments by reference. We also applaud the BLM's decisions in the last couple of years to remove tracts offered to the south of Teshekpuk Lake in important caribou and migratory bird habitat during recent lease sales. Additionally, we hope the Administration will continue to follow President Obama's direction in his May 2011 announcement when he stated that future Reserve sales would be held, "while respecting sensitive areas." Protecting the extraordinary values in and around the Teshekpuk Lake Special Area as well as other Special Areas within the Reserve is necessary to achieve balance in managing these important lands.

TWS and the other organizations represented on this letter seek reliable and effective protection for the nationally and internationally recognized wildlife habitats, wild rivers, subsistence, cultural resources and wilderness lands found in the Reserve. The most biologically-rich and recognized wildlife and wilderness values of the Arctic are not reliably, effectively, or permanently protected at this time, and these values should not be compromised. A precautionary and balanced approach to the management of the Reserve's natural resources is warranted and needed to protect the most sensitive areas and cultural resources.

We believe that BLM needs to give consideration to all values of the Reserve, not just oil and gas resource development values, as it moves forward with the Areawide planning effort. BLM has a multiple use mandate that requires the agency to "prevent unnecessary or undue degradation" [2] and the statutory requirements for the Reserve provide for "maximum protection" [3] of the important ecological and cultural resources of the Reserve. To BLM's credit, Alternative B in the Draft Plan meets these criteria, and still leaves approximately half of the Reserve open to oil and gas leasing and development.

As BLM staff know, in 2010 the U.S. Geological Survey (USGS) estimated that there likely are 896 million barrels of undiscovered oil in the Reserve, approximately 10% of the 2002 USGS estimate. [4] Depending on the price of oil and the time of construction of a natural gas pipeline from the North Slope, actual production in the Reserve likely will be significantly less than 896 million barrels. As a result of the relatively limited oil present in the Reserve - and at this point virtually all oil development in the Reserve is speculative - BLM should reject any decision that is less than the level of protection contained in Alternative B in the Draft Plan. The difference in the likely production for the "Drill It All" Alternative D (491 million barrels of undiscovered conventional oil) and Alternative B (235 million barrels of undiscovered conventional oil) is less than two weeks usage of crude oil in the U.S. at the current usage rate of 18.84 million barrels per day. [5]

II. BACKGROUND

A. Globally Significant Living Resources in the Reserve

The Reserve is an extraordinary and globally recognized ecological resource. At close to 23 million acres, these western Arctic lands are home to bears, musk oxen, caribou, and millions of migratory birds that nest and breed on Alaska's north coast. The lakes and lagoons of the Reserve, such as the iconic Teshekpuk Lake along the Beaufort coast, are the birthplace of millions of birds that fly to all 50 states and 5 continents. Congress recognized these extraordinary values, which include fish, wildlife, wilderness, cultural, subsistence, recreational and historical values, when it transferred management of the Reserve from the Navy to the BLM in 1976.

The wildlife values of the Reserve include: high densities of breeding birds, species listed as threatened under the Endangered Species Act; the calving, insect relief, and migration areas of two of the state's largest caribou herds – the Western Arctic and Teshekpuk Caribou herds – which provide vital subsistence resources for more than 40 communities in northern and western Alaska; designated critical habitat for threatened polar bears all along the coastal area of the Reserve; and, important habitat for other marine mammals such as haul-out areas and near shore waters for Pacific walrus and seals.

There is emerging and changing science regarding the Reserve, and much current baseline biological information throughout the Reserve remains unknown. For example, a soon to be published US Fish and Wildlife Service report [6] based on the best available science incorporating two decades of research in the western Arctic has identified the Teshekpuk Lake Special Area as containing possibly the highest density breeding shorebird habitat in all of the circumpolar Arctic. Other areas, too, are emerging as important for birds including the Dease Inlet/Meade River and Peard Bay areas within the Reserve. All of these wetlands areas are part of what is one of the largest wetlands complexes in the Circumpolar Arctic. Recent changes and the shrinking of sea ice are shifting migration timing, patterns and behaviors for a number of Arctic species including Pacific walrus, which now are hauling out in significant numbers on land such as in Kasegaluk Lagoon and Peard Bay, when before they would have chosen pack ice. Polar bears are swimming longer distances and spending more time onshore waiting for sea ice to form in the fall, increasing the importance of onshore coastal designated critical habitat.

The Draft Plan considers over a dozen Arctic communities that use the Reserve for subsistence resources, including marine mammal, fish, waterfowl, caribou and other terrestrial mammals as well as plant and water resources. Subsistence activities provide primary food sources for these

communities, as well as cultural, social and spiritual values that are critical to Native people. The Reserves unparalleled wildlife, habitat and other special values provide for the continued viability of a subsistence way of life which is critical to the survival and culture of Alaska Native people.

Unfortunately, existing oil and gas development in the Arctic has already compromised the ecological integrity of the Arctic Slope, putting its ecological integrity at considerable risk due to poorly planned, piecemeal and damaging development. The National Academy of Sciences National Research Council (NRC) March 2003 report Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope confirms that oil and gas drilling has had profound impacts on the region's environment. These effects stretch far beyond the immediate footprint of the industrial complex itself, and are having lasting cumulative impacts on the land, water, people and wildlife of America's Arctic. In the slow-healing Arctic environment, some of the changes to the landscape may persist for centuries. These effects are compounded by the impacts already evident on the Arctic Slope from climate change. [7]

B. The Naval Petroleum Reserves Production Act has a Significant Conservation Focus

In the Naval Petroleum Reserves Production Act of 1976 (NPRPA) [8], Congress expressly recognized that the unique cultural, natural, fish and wildlife, scenic and historical values of the Reserve should be protected, and transferred jurisdiction of the nearly 23 million acre Reserve from the Secretary of the Navy to the Secretary of the Interior. [9] It also required the Secretary of the Interior to give special protection to a number of so-called "Special Areas," specifically mentioning Teshekpuk Lake and Utukok River Uplands, [10] and to initiate studies of the Reserve to determine what additional protections should be recommended to Congress. In recognition of their high wildlife values, the Secretary of the Interior in 1977 designated three Special Areas within the Reserve: Teshekpuk Lake, Utukok River Uplands, and the upper Colville River. Since then, Kasegaluk Lagoon Special Area was designated in 2004 at the conclusion of the Northwest Planning Process, [11] and BLM has proposed the new Peard Bay Special Area in the Draft Plan. Under the NPRPA, the Secretary is obligated to give "maximum protection" to the surface resources of these Special Areas while carrying out the leasing purposes of the Act.

While the NPRPA mandated that the Secretary undertake "an expeditious program of competitive leasing of oil and gas," [12] Congress clearly did not intend for this to occur at the expense of sensitive and high-value areas in the Reserve. The Secretary is fully authorized in the NPRPA and implementing federal regulations to set aside areas that contain "significant subsistence, recreational, fish and wildlife, or historical or scenic value." [13]

The regulations published in 1977 pertaining to the NPRPA further clarified "Management and Protection" direction for the Reserve, directing that "Maximum protection measures shall be taken on all actions within the Utukok River Uplands, Colville River and Teshekpuk Lake special areas, and any other special areas identified by the Secretary as having significant subsistence, recreational, fish and wildlife or historical or scenic value." [14] Section 2361.1 Subsection (d) outlined a process for recommending new Special Areas and the Secretary of the Interior has full authority to designate new Special Areas determined to have special values requiring maximum protection and to protect special values of the Reserve. These new Special Areas are subject to the same "maximum protection" as described above. With passage of the NPRPA, Congress clearly provided the Secretary with the authority to protect high value areas within the Reserve and gave the Secretary the discretion to determine how best to use the lands within the Reserve.

C. BLM's Planning Obligations

BLM is obligated to manage its lands consistent with the concept of multiple use, though the Reserve does not have standard multiple use purposes and is more limited in its purpose. For example, the original Presidential Executive Order and Congressional statute withdrew it from coal and hardrock minerals mining. [15] The definition of multiple use [16] obligates BLM to

prioritize the national public interest in public lands in terms of both current and long-term needs. These needs (and uses) are both market and non-market based. BLM must consider the "relative" value of resources and cannot authorize a particular use based purely on the contribution of that use to the economy. All management is bounded by the mandate to prevent "permanent impairment of the productivity of the land and the quality of the environment." [17] Under this provision, once a use runs its course, the land must be reclaimed to its original baseline health and integrity.

The counterpart provision to multiple use is sustained yield. [18] This obligation requires BLM to emphasize the long-term management potential of our public lands to satisfy the needs of both current and future generations. Needs are satisfied only to the extent that they do not permanently impair the productivity of the land or quality of the environment. Resources that may become more valuable as time passes include wilderness, wildlife habitat, water quantity, wetlands functions, and watershed protection.

The "unnecessary or undue degradation" provision reads:

In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands. [19]

The impacts of an action could be deemed unnecessary if the BLM could avoid harm to the land or the environment, or if the BLM's actions are ill-advised (for example, the costs outweigh the benefits, the resources harmed are rare, or the action is not sustainable). The impacts of an action could also be deemed undue even where those impacts are considered necessary (e.g., unavoidable) to the proposed action. This type of situation could arise if the action permanently impairs the productivity of the land or quality of the environment. It could also arise where the action has an exceptionally high negative impact on other resources, or, similarly, where the action prevents the public from realizing other resource values.

BLM must balance short and long-term costs and benefits in the Final Plan and its Record of Decision. BLM must also consider in these documents the potential uses of the public lands and disclose how resource uses result in losses of lands for wilderness, wildlife habitat, subsistence and watershed protection. A systematic, interdisciplinary, reproducible approach to planning that incorporates the thinking of multiple professional disciplines (e.g., biology, ecology, archeology, hydrology, engineering) and traditional ecological knowledge will move BLM forward toward a positive outcome for the Reserve.

D. Unavailable for Leasing vs. Surface Protection Requirements:

To ensure "maximum protection" for areas with "significant subsistence, recreational, fish and wildlife, or historical or scenic value," [20] key areas in the Reserve must be unavailable for leasing. If areas are unavailable for leasing – including the full definition of this management designation/ allocation as shown on Map 2-2 [21]- there will be reliable and effective protection for important surface values. In contrast, utilizing "surface protection requirements" such as lease stipulations or Best Management Practices (BMPs) as included in the Draft Plan for key areas, represents a weaker, i.e., not a "maximum," form of protection.

The "surface protection requirements" included in the Draft Plan for leased areas (including all areas available for leasing) do not provide reliable and effective protection of areas with "significant subsistence, recreational, fish and wildlife, or historical or scenic value" for at least four key reasons:

1. The intrusion of human activity in an otherwise undeveloped pristine, wild and sensitive environment, including the construction of roads and pads, the use of motor vehicles and drill rigs, the excavation, hauling and moving of gravel, the construction and maintenance of pipelines, construction and operation of production facilities, staging areas, temporary and permanent camp operations, power plants, gas handling facilities, pump stations, seawater treatment plants and injection facilities, ports, air traffic, etc., will impact sensitive surface

values and wilderness character, and will result in direct and indirect loss and degradation of habitats.

2. Even with stringent stipulations and BMPs, at some point there will be spills and other adverse impacts such as tundra damage and disturbances related to spill response in addition to typical operations. This results from the complicated nature of oil and gas production, including the non-homogeneous and somewhat unpredictable nature of subsurface geology. To illustrate this inherent inability to prevent all accidents, it's notable that this past winter's gas blowout and drill cuttings release on the North Slope by Repsol during exploratory drilling was a surprise to both the operator and the regulators. Both reviewed subsurface data prior to drilling and neither anticipated a shallow gas hazard. [22]

3. There can be waivers, exceptions, or modifications to stipulations, and BMPs are only "guidance" [23] utilized by BLM's authorized officer, and thus potentially subject to the whims of politics including changes from one administration to another. For example, the A-2 BMP does not make injection of all produced (waste)water mandatory, [24] which we find inadequate to protect surface values, and

4. There are no BLM dismantlement, infrastructure removal, and land restoration (DR&R) requirements, nor sufficient bonding requirements, to ensure a return of the Reserve to its original condition. [25] The state bonding requirement of $500,000 for DR&R, which covers all company leases in Alaska, clearly is inadequate.

E. Problems with the Draft Plan's Key Assumptions

[Preamble 28.007, 008, 009, 010] The Draft Plan contains a number of key assumptions that most likely are not realistic. These assumptions provide questionable analysis in the Draft Plan and most likely underestimate the effects of oil and gas leasing and development especially for Alternatives A, C and D. The following assumptions are problematic:

[28.007] • Oil and gas accumulations are equally probable throughout an economic zone. [26] There is sufficient evidence to consider the greater probability of oil being found in the Barrow Arch region. This would, for example, significantly increase impacts on calving caribou for Alternatives A, C and D.

[28.008] • Pipelines will not have roads associated with them. [27] Roads are projected for connecting development in the Alpine Satellite Fields CD-5, 6 and 7 and back to Alpine itself. Furthermore, BLM's Alpine Satellites Full-Field Development from the 2004 Environmental Impact Statement showed additional roads connecting to Alpine.

[28.009] • Pipelines will not have a disturbance effect on caribou. [28] If caribou with calves are in fact sensitive to the construction, presence and monitoring, and maintenance of pipelines (e.g., helicopter overflights), then the impacts of pipelines without roads on females with calves could occur under all alternatives, but would likely be significantly greater under Alternatives A, C and D.

[28.010] • Gas pipelines will be buried. [29] We question the likelihood that gas pipelines would be buried in the wetland complexes around Teshekpuk Lake. Buried pipelines would impact waterbodies and wildlife habitat. Aboveground gas pipelines may need to be constructed if the impacts from burying are likely to be significant.

III. OVERVIEW AND DISCUSSION OF THE ALTERNATIVES

The four Alternatives offered in the Draft Plan include the following highlights:

Alternative A – the No Action Alternative:

- approximately 13 million acres (57%) available for leasing, with 2 million acres remaining deferred from leasing until 2014 or 2018 (deferrals = 1.57 million acres in NW Reserve, 425,000 acres north and east of Teshekpuk Lake) and open for leasing after deferrals expire (January 22, 2014 and July 16, 2018, respectively)

Alternative B

- approximately 11 million acres (48%) available for leasing, with some deferred lands available for leasing after expiration of deferrals and some deferral lands in unavailable for leasing status
- encompasses and supersedes the current time-limited (2018) deferral for wetlands north and east of Teshekpuk Lake by classifying these sensitive lands as unavailable for leasing. Only Alternative B makes these internationally significant Pacific Brant and other goose molting areas, as well as other vital migratory bird and caribou habitats in the long-established Teshekpuk Lake Special Area unavailable for leasing
- Special Area Enlargements and one new Special Area

Teshekpuk Lake Special Area:

- approximately 2 million acres added to protect caribou calving and insect-relief areas and waterbird and shorebird breeding, molting, staging, and migration habitats
- purpose expanded to include protection of important caribou calving and insect-relief and shorebird habitats, in addition to important nesting, feeding, and molting habitat for ducks, geese, and swans and other waterbirds, which was the original purpose for the Special Area

Kasegaluk Lagoon Special Area:

- expand 267,000 acres southward for protection of waterbird and shorebird breeding, molting, staging, and migration habitats
- purpose specified to protect shorebird and other waterfowl habitat values, in addition to the original designation of Kasegaluk Lagoon for its "high values for marine mammals" and value as a "unique ecosystem for the arctic coast" [30]

Utukok Uplands Special Area:

- approximately 3.1 million acres added to more fully encompass prime calving and insect-relief habitat for the Western Arctic Caribou Herd

New Peard Bay Special Area:

- 1.6 million acres to protect haul-out areas and nearshore waters for marine mammals and habitat for waterbird and shorebird breeding, molting, staging, and migration

Purpose of Colville River Special Area:

- modified to protect all raptors, rather than the original intent of protection for arctic peregrine falcons

- Approximately 3.1 million acres within the expanded Teshekpuk Lake Special Area from Fish Creek in the east to Dease Inlet on the west unavailable for leasing (important calving and insect-relief areas for Teshekpuk Lake Caribou Herd); important waterfowl and shorebird habitat and subsistence use areas)
- Approximately 8.2 million acres in the southern part of the Reserve would also be unavailable; these are remote lands with primitive recreation values as well as important calving and insect-relief habitat for the Western Arctic Caribou Herd (and likely do not contain sizable oil and gas reserves)
- Major coastal waterbodies unavailable for leasing to protect marine habitat and shorelines important for marine animals, waterfowl, and shorebirds — Elson Lagoon, Dease Inlet, Admiralty Bay, Wainwright Inlet/Kuk River, Peard Bay, and Kasegaluk Lagoon (depicted on Map 2-2) and associated barrier islands and, in the case of Peard Bay and Kasegaluk Lagoon, lands within 1 mile of those two waterbodies

- Lands that are unavailable generally would not permit new, non-subsistence permanent infrastructure (whether or not related to oil and gas activities) or exploratory drilling with two exceptions: 1) following National Environmental Policy Act analysis and subject to permit conditions, subsurface pipelines under Wainwright Inlet/Kuk River, and 2) drilling and infrastructure necessary for exploration, development, production, and abandonment of valid existing oil and gas leases in the Reserve. This would protect the ecological values and wilderness characteristics of the lands and allow continued subsistence and cultural uses to continue. Hunting, fishing, and trapping structures and temporary access (e.g., motorboat, snowmobile [with adequate snow cover] and off-highway vehicle (OHV) use, and airplane use, including use of unimproved landing areas) would be allowed.
- Wild and Scenic River designations - all or portions of 12 rivers recommended for wild river designation by Congress: Colville (where the BLM manages the riverbed and both banks in and above T6S, R17W, U.M.), Nigu, Etivluk, Ipnavik, Kuna, Kiligwa, Nuka, Awuna, Kokolik, and Utukok rivers and Driftwood and Carbon creeks

Alternative C

- 17.9 million acres (76 %) of the Reserve available for leasing
- 4.4 million acres in the far south unavailable for leasing
- surface protection requirements for oil and gas development through stipulations and BMP procedures elsewhere in the Reserve, notably near Teshekpuk Lake
- currently deferred lands not available until after the expiration of the deferrals in 2014 for the NW and 2018 in the Teshekpuk Lake area. However, in contrast to Alternative B, it does not make any lands in the Teshekpuk Lake Special Area (except the lake bed itself) unavailable for leasing. [31]
- Special Area Enlargements and one new Special Area but with weaker protections than Alternative B:
  - o enlarge Teshekpuk Lake Special Area approximately 120,000 acres
  - o enlarge Utukok River Uplands Special Area approximately 470,000 acres to more fully encompass caribou calving habitat
  - o modify purposes of the Teshekpuk Lake Special Area and the Colville River Special Area in the same way as Alternative B
  - o create new Peard Bay Special Area - 107,000-acres to protect haul-out areas and nearshore waters for marine mammals and a high use staging and migration area for shorebirds and waterbirds
- Unavailable for leasing:
  - o existing Kasegaluk Lagoon Special Area
  - o new Peard Bay Special Area
  - o major coastal waterbodies (Elson Lagoon, Dease Inlet, Admiralty Bay, and Wainwright Inlet/Kuk River) to protect habitat important for marine mammals and birds
  - o does not give this management designation to the existing Utukok River Uplands Special Area or Teshekpuk Lake Special Area.
- Exploratory drilling and non-subsistence permanent infrastructure not allowed in lands unavailable for leasing in the southern part of the Reserve, Kasegaluk Lagoon or Peard Bay Special Areas, within the above listed waterbodies except for a possible subsurface pipeline

under Wainwright Inlet/Kuk River or for infrastructure necessary for exploration, development, production, and abandonment of valid existing oil and gas leases in the Reserve

- Wild and Scenic River designations - recommend Colville River (where BLM manages the river), the Utukok River (within the Reserve), and the Kiligwa River for designation by Congress

Alternative D

- All lands would be made available for oil and gas leasing, though leasing in lands currently deferred from leasing not offered for lease until deferrals have expired
- Lands with particularly high surface values, especially those within Special Areas, would all be available for leasing, and would receive special protection only through BMPs; several stipulations common to the other alternatives to protect biological resources near Teshekpuk Lake would not apply or would be less restrictive in this alternative
- No expansions or new Special Areas
- No prohibition of new permanent infrastructure even in Special Areas
- No rivers recommended for Wild and Scenic River designation by Congress
- No notable conservation measures for some of the Arctic's and the globe's highest ecological-value areas

IV. RECOMMENDATIONS

A. Why BLM Should Select Alternative B

Given the Secretary's authority to determine how best to manage the lands within the Reserve and to protect Special Areas that contain extraordinary values by providing maximum protection for those areas, it is reasonable to assume that a full range of alternatives could be analyzed for the Reserve. The Draft Plan offers a range of alternatives that includes an alternative that would open the entire Reserve to leasing at one end of the spectrum (Alternative D) and one that would open up approximately 11 million acres or one-half of the Reserve to leasing while making the majority of the remaining lands11.8 million acres unavailable for leasing (Alternative B) at the other end of the spectrum. The Draft Plan does not, however, include a counter-alternative to Alternative D that would make all lands in the Reserve unavailable for leasing. Had BLM included such an alternative, Alternative B would be recognized as a reasonable alternative that sits virtually in the middle of those two extremes. Furthermore, Alternative C is disappointingly similar to the Bush Administration's plan (presented in Alternative A) for the Northwest and Northeast parts of the Reserve and particularly so for the Teshekpuk Lake Special Area.

Discussion of Alternative B

In Alternative B, virtually half (11 million acres) of the Reserve would be available for leasing and a little more than half (11.8 million acres) would be unavailable for leasing. The organizations represented in this letter strongly support Alternative B, as it would protect the Reserve's extraordinary and globally significant wildlife, subsistence and wilderness resources that are deserving of the highest levels of protection. By categorizing 11.8 million acres of the Reserve's most significant surface values as unavailable for leasing along with the management definitions given in Map 2-2, BLM offers maximum protection for the majority of high-ecological and subsistence values in the Reserve, as it is required to do under the NPRPA. Anything short of unavailable for leasing would not provide maximum protection for these globally significant resources.

Overall, the quantities projected for the entire Reserve are only a small fraction (~500 million barrels of economically recoverable oil) [32] of what has been produced in North Slope oil fields (~16 billion barrels of oil) [33] on state lands to the east of the Reserve. The amount of

undiscovered oil projected to potentially occur in the region around Teshekpuk Lake is approximately 25% of the Reserve's projected economically recoverable oil, or only approximately 2% of the over 5 billion barrels of oil projected to be recoverable from state lands on the North Slope. [34]

In contrast to the limited quantities of oil (and the Reserve's natural gas which is stranded and likely will remain so for decades), the wildlife and habitat resources in the Reserve are immense, world-class and priceless. A recent analysis led by TWS Wildlife Ecologist Dr. Ryan Wilson found that the combination of resources that the Teshekpuk Lake Herd select during calving and insect-relief periods appear to be uniquely concentrated within the areas north and southeast of Teshekpuk Lake. [35] There does not appear to be similar alternative habitat where calving caribou from this herd can go if oil and gas development is allowed on their calving grounds.

TWS has developed a model that quantitatively measures the potential impacts of 100 scenarios of oil and gas development on Teshekpuk Lake Herd calving caribou for each of the alternatives within the Draft Plan. Our results show that existing leases for oil and gas resources in the Bear and Moose's Tooth units will deplete high-value calving habitat by roughly 6%. Alternative B is the only alternative which keeps high-value calving loss to a minimum (~10%) by not allowing further leasing in critical Teshekpuk Lake Herd caribou calving habitat (see Attachment A). Alternative B also protects the calving, insect relief and migratory habitats of the Western Arctic Caribou Herd. Significantly less of the calving grounds of both herds are reliably protected under the other alternatives, and our results suggest that one-third of high quality calving habitat for the Teshkpuk Lake Herd could be lost under Alternative D. These are conservative results based on the assumptions in the Draft Plan. While this modeling provides a first step in assessing effects of the proposed Alternatives in the Draft Plan on high-value caribou calving habitat within the NPR-A, we recognize it is also important to analyze stressors and habitat loss during additional life phases (e.g., post-calving insect relief and migration), as well as to assess cumulative impacts from development outside the NPR-A. (e.g., insect relief and migration).

Studies led by the Wildlife Conservation Society have consistently shown higher nest survivorship for passerines and some shorebird species at a site in the Teshekpuk Lake Special Area compared to oil-developed sites to the east. 36,37 In the most recent assessment combining long-term data sets from two remote sites within the Teshekpuk Lake Special Area and the two largest oil fields (Kuparuk and Prudhoe Bay), shorebirds as a group have higher nest survivorship at the remote sites. A key covariate driving this result is the presence of oil field infrastructure. [38] A broader implication of these nest productivity evaluations suggest that the Teshekpuk Lake Special Area may harbor "source" breeding bird populations (birds in high value habitat providing high reproductive output) while some of the species nesting in the oil fields are comparatively "sink" populations (populations in low quality habitat, where the habitat, on its own, would not be able to support a population). Despite efforts by the oil industry to limit the influence of "subsidized predators" (i.e., those species – Arctic Fox, Common Raven, and Glaucous Gulls – which have increased in the oil fields), recent evidence indicates that subsidized predators like Glaucous Gulls and Common Ravens still are more prevalent in the Prudhoe Bay area compared to sites in the Teshekpuk Lake Special Area. [39] These higher predator abundances are correlated with lower shorebird nest survivorship. [40] Reliable protection of this world-class breeding ground for many species in global population declines can be achieved through Alternative B. The other alternatives allow significantly more infrastructure and would therefore be likely subject to similar types of adverse direct and indirect impacts.

Alternative B achieves reliable protection for many other species as well. A synthesis of existing biological data by Audubon Alaska and others [41] reinforces the importance of the Teshekpuk Lake Special Area for molting geese, the four species of eiders, three species of loons, numerous species of ducks including many important to subsistence, polar bears and many others. As

delineated in Alternative B, the Teshekpuk Lake Special Area encompasses the highest-value and highest-use habitat for many species within the Reserve and provides reliable protection by not allowing oil and gas leasing.

Alternative B also provides maximum protection for the entire existing Utukok River Uplands Special area through designation of lands unavailable for leasing, which none of the other alternatives does. The alternative suitably expands this management zone to include additional vital caribou calving, insect-relief and migration areas in the Arctic Foothills and the DeLong Mountains areas, as well as the Upper Colville River Special Area. This area is also important for its other wildlife, wilderness, and wild river values.

Alternative B also includes the wildlife-rich coastal lagoon and estuary areas and their sensitive coastlines in the "unavailable for leasing" management designation. This is true for the existing Kasegaluk Lagoon Special Area, the estuary and coastlines for the new Peard Bay Special Area, and for Dease Inlet. Alternative C also includes these areas as unavailable for leasing.

Discussion of Alternatives A, C and D:

Alternatives A, C and D do not meaningfully protect high value ecological and Special Areas of the Reserve and thus do not meet the NPRPA requirements of maximum protection for the Reserve's Special Areas and values. Alternative A is the No Action alternative and would continue management as it is today within the Reserve, without management guidelines in place for the South Planning Area. In this alternative, lands that are deferred in the Kasegaluk Lagoon and Teshekpuk Lake Special Areas, for example, would remain deferred from leasing until 2014 and 2018 respectively, but after that would be fully available for leasing (except the bed of Teshekpuk Lake itself). For the southern planning area, there would be no protection or management guidelines in place. This would leave this important habitat area for caribou and many other species at significant future risk. Thus, significant portions of vital caribou, bird and marine mammal habitat would not be meaningfully protected under Alternative A.

While Alternative C includes some conservation measures, such as the lagoons and coastal areas that are unavailable for leasing, similar to Alternative B and discussed above, it does not support the requests by many local Arctic communities to reliably and effectively protect important subsistence resources. Alternative C includes stipulations that are aimed at protecting the exceptional biological and physical values across the Reserve, however, significant impacts will occur to some species even if the stipulations are carefully applied (as discussed in section II.D. of these comments). If the past is precedent, then exceptions to the stipulations are highly likely and therefore their protective intent will be illusory.

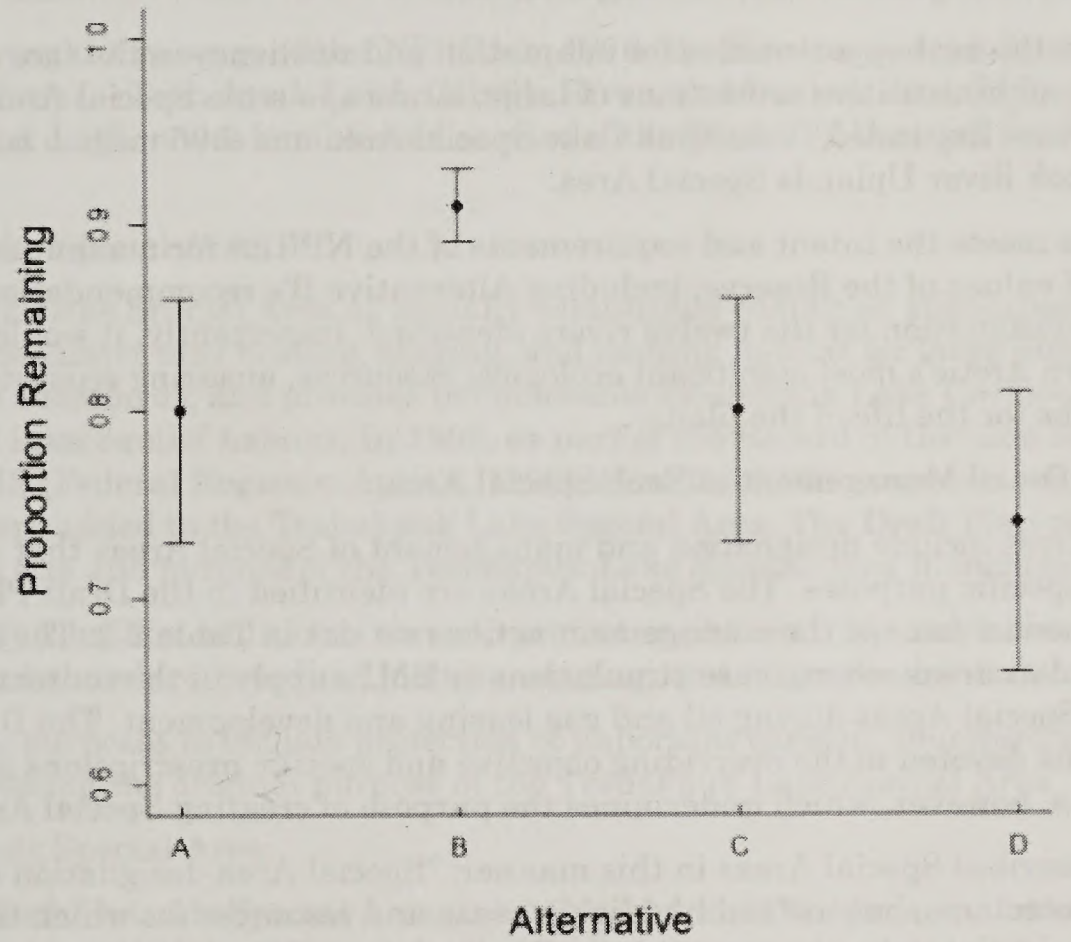
As is the case with Alternative A, a significant portion of the critical caribou, bird and marine mammal habitat found within the Kasegaluk Lagoon and Teshekpuk Lake Special Areas would be at risk in Alternative C after the deferrals in these areas expire. While the DeLong Mountains/Arctic Foothills as well as a portion of the southern existing Utukok River Uplands Special Area would be made unavailable for leasing, stipulations offered elsewhere as protective measures in the Draft Plan may be subject to exceptions and thus cannot be fully relied upon. This combined with a reduction in areas unavailable for leasing overall (4.4 million acres in Alternative C vs. 11.8 million acres in Alternative B), would mean a significant diminishment in protection of special values and areas in the Reserve.

Opening up the entire Reserve to leasing, Alternative D is an extreme alternative that does not provide for protection of subsistence resources or meet the requirements of the NPRPA. If this alternative were adopted in the final plan, many of the world's most significant Arctic ecological resources would be put at greater risk than they are already.

A TWS analysis of development scenarios and their impacts to important Teshekpuk Lake caribou habitat based on assumptions made in the Draft Plan for all of the alternatives (Attachment A) demonstrates that of the four proposed management alternatives in the Draft Plan, Alternative B likely would have the lowest reduction in high-value calving habitat.

Approximately 91% on average (95% CI: 89-93%) of high-value calving habitat is likely to remain if oil and gas development occurs in the Reserve in a manner similar to what is assumed in the Draft Plan under Alternative B. The analysis also indicates that the remaining amount of high-value caribou calving habitat would be significantly less under either Alternative A, C or D, with Alternative D having as low as 66% of high-value habitat remaining after oil and gas development. Alternative B also showed the lowest variability in the proportion of habitat likely to be lost compared to the other alternatives (see Figure 1 below, from Attachment A).

Figure 1
Comparison of Alternatives Showing Percentage of High-Value Calving Habitat Remaining



Proportion (mean ± 95% Confidence Interval) of high-value calving habitat remaining after direct (i.e., development footprint) or indirect (i.e., avoided) loss to calving females in each alternative. Development only includes roads and oil and gas pads. Pipelines without roads are not included because their impact on caribou space use during calving is unclear. For each alternative, TWS ran 100 simulations of development footprints based on the predicted development and restrictions contained in the Draft Plan.

Alternative B is the only alternative in the plan that makes nearly all of the high-value calving habitat unavailable for leasing, and therefore is the only alternative that can reliably protect calving caribou from development impacts. We believe these results are a conservative measure of the direct and indirect loss of calving habitat for the Teshekpuk Caribou Herd for the reasons outlined in Attachment A. As BLM knows, the Teshekpuk Caribou Herd is of critical importance to the Arctic communities that rely on it greatly for subsistence.

Additionally, based on the absence of oil projections, the lack of impact assessment, and the fact that this area provides critical calving habitat and migration corridors for the Western Arctic Herd, there should be no leasing in the areas delineated as the Utukok River Special Area and the upper Colville River Special Area, as is provided for under Alternative B. Alternatives A, C

and D are inadequate for protecting critical caribou calving habitat of the Western Arctic Herd because they allow development to occur in essential habitat.

Recommendation: Adopt Alternative B as BLM's preferred alternative in the Final Plan as it:

a) meets the requirements to provide maximum protection for the existing and proposed expanded Special Areas for caribou, migratory birds, marine mammals, and other fish and wildlife. As discussed above, maximum protection can only be met by making areas unavailable for leasing rather than by relying on surface protection requirements.

b) meets the requests of local Arctic communities, as in the resolutions of the Western Arctic Caribou Herd Working Group and that of many other local community entities and tribes, to protect important subsistence resources.provides meaningful, administrative protections for the highest-value ecological areas in the Reserve; and

c) provides species the best opportunities for adaptation and resiliency in the face of climate change through administrative protections of large, landscape-scale Special Areas, such as the 3.76 million acres – Expanded Teshekpuk Lake Special Area and 7.06 million acres – Expanded Utukok River Uplands Special Area.

Alternative B best meets the intent and requirements of the NPRPA for maximum protection of Special Areas and values of the Reserve, including Alternative B's recommendations for Wild and Scenic River designation for the twelve rivers identified. Importantly, it would meaningfully protect the western Arctic's most significant ecological resources, ensuring ecosystem health and wildlife populations for the life of the plan.

B. BLM Needs to Detail Management of Each Special Area

All of the alternatives include designation and management of Special Areas that are established with specific purposes. The Special Areas are identified in the Draft Plan in Table 2-1 and are mentioned in some of the management actions set out in Table 2-2. The Special Areas also are mentioned as areas where lease stipulations or BMPs apply in the context of protecting the values of the Special Areas during oil and gas leasing and development. The Draft Plan does not contain sections devoted to the overriding objective and specific prescriptions applicable to each of these areas, however, which undermines the purpose of creating Special Areas.

The Draft Plan describes Special Areas in this manner: "Special Area designation does not itself impose specific protections, but instead highlights areas and resources for which the BLM will extend 'maximum protection' consistent with exploration of the Reserve." [42] As the BLM acknowledges, there are no "specific protections" inherent in a Special Area designation. Consequently, it is incumbent upon BLM to set out a goal for designation and management, as well as specific management prescriptions that apply to provide maximum protection to each Special Area and its purposes. In Section 2.3, Description of the Alternatives, the important values of each Special Area should be more comprehensively specified.

In Attachment B, we provide one example of a management approach that demonstrates how overriding objectives and specific management prescriptions can guide management actions for a specific area that may be applicable to the Special Areas identified in the Draft Plan, i.e., The Draft Resource Management Plan (Draft RMP) for the Lower Sonoran Field Office and Sonoran Desert National Monument (in Arizona). [43] The Draft RMP proposes designation of both Wildlife Habitat Areas (WHAs) and Wildlife Movement Corridors to protect priority habitats. WHAs would be managed with an overall goal to: "Ensure habitat availability and diversity for priority wildlife resources is (sic) maintained and/or improving within WHAs, where priority species would receive primary focus when analyzing activities and projects." [44] Wildlife Movement Corridors would be managed with an overall goal to: "Ensure wildlife movement corridors contain ample habitat to assist wildlife in moving from one area to another in a relatively safe manner." [45] Both designations have specific management objectives and prescriptions set out to include limiting surface disturbance and road density, and similar concepts could be used in the Reserve.

Recommendation: To present a coherent and legally-supportable management approach to the Special Areas, the Final Plan should incorporate standalone sections for the Special Areas, discussing the overriding goal of designation and management, detailing the specific values that will be protected, and setting out the specific management prescriptions that apply. This recommendation is not intended to override or eliminate BLM's proposals to make either all or significant portions of Special Areas "unavailable for leasing," as in Alternative B of the Draft Plan, since we strongly support the areas identified in Alternative B as unavailable for leasing and believe it is the strongest management tool BLM has to protect special values and areas in the Reserve. Identifying goals and accompanying management prescriptions for Special Areas would help provide guidance for future management actions aimed at protecting the special values of the areas.

C. Expanding Existing Special Areas and Including Additional Values

In 1977, following the passage of the NPRPA in 1976, the Secretary of the Interior designated three Special Areas – Teshekpuk Lake, Colville River, and Utukok River Uplands. Later, in 2004, Kasegaluk Lagoon was established as part of the Record of Decision for the Northwest NPR-A plan.

Teshekpuk Lake Special Area:

The Teshekpuk Lake Special Area as initially established contained approximately 1.7 million acres. It includes important nesting, staging, and molting habitat for large numbers of waterfowl and shorebirds, and provides irreplaceable Teshekpuk Lake Caribou Herd calving, migration and insect-relief habitat. In 1998, as part of the Record of Decision for the Northeast NPR-A IAP/EIS (Federal Register, April 6, 1999), close to 10,000 acres encompassing the Pik Dunes area were added to the Teshekpuk Lake Special Area. The Draft Plan proposes expanding the size and purpose of the Teshekpuk Lake Special Area to include:

- approximately 2 million additional acres to protect caribou calving and insect-relief areas and waterbird and shorebird breeding, molting, staging, and migration habitats; and
- enlarging the purposes to include protection of important caribou, shorebird and waterbird habitat, reflecting the original purpose of the Teshekpuk Lake Special Area

Utukok Uplands Special Area:

The Utukok River Uplands Special Area as established in 1977 spans approximately 4 million acres containing much of the Western Arctic Herd's calving and insect-relief habitat. The herd numbered approximately 75,000 when this area was established, and now at approximately 340,000, is Alaska's largest caribou herd. The Draft Plan proposes expanding this Special Area to include:

- approximately 3.1 million additional acres to more fully encompass prime calving and insect-relief habitat for the Western Arctic Caribou Herd

Kasegaluk Lagoon Special Area:

Kasegaluk Lagoon Special Area, as established in 2004, encompasses approximately 97,000 acres and includes the lagoon, its barrier islands and an area 1 mile inland from the shore of the lagoon. It was designated for its high values for marine mammals, wilderness character, and notable primitive recreation opportunities, and is a rich ecosystem on the Arctic Slope with marine tidal flats, a unique feature in the Arctic.

- expand 267,000 acres southward for protection of waterbird and shorebird breeding, molting, staging, and migration habitats

Colville River Special Area:

As originally established, the Colville River Special Area encompassed 2.3 million acres and provided some of the most significant Arctic habitats for raptors. [46] The majority of the lower

river area supports the highest densities of raptors, passerines and moose on Alaska's Arctic Slope. The Northeast NPR-A Record of Decision expanded the Colville River Special Area by 2.44 million acres to incorporate two miles on either side of two major tributaries of the Colville River - the Kikiakrorak and Kogosukruk rivers.

- The Draft Plan proposes expanding the purposes for which the Colville River Special Area was established to protect all raptors, rather than the original intent of protection for arctic peregrine falcons

Establishment of new Peard Bay Special Area:

The Draft Plan proposes establishing a new Peard Bay Special Area that would encompass:

- 1.6 million acres to protect haul-out areas and nearshore waters for marine mammals and habitat for waterbird and shorebird breeding, molting, staging, and migration

Proposed expansions of these Special Areas in the Draft Plan, listed above in Section would provide better protection for scientifically documented habitats, such as Teshekpuk Lake caribou habitat for that respective area; the inclusion of headwater rivers within key watersheds to protect clean water, connectivity for fish and wildlife, and adequate buffer zones to protect riparian and upland habitats, and protection of caribou migration corridors and sensitive marine and coastal habitats.

These Special Area expansions incorporate the principles of conservation biology, focusing on ecosystem and watershed integrity and protection, buffer zones around critical wildlife habitats built into management protections, and the importance of corridors for movement of animals between diverse uplands and coastal areas or between seasonal areas of use. The recommendations are also based on the best available information regarding habitat and adaptation needs of wildlife and ecosystems facing dramatic shifts as the result of climate change and the benefits served by retention of wilderness values. [47]

The Special Area expansions also reflect the concept that protection measures that support healthy, intact ecosystems are our best tools for: 1) maintaining the overall health of a region, including its communities; and 2) allowing ecosystems and the species that depend on them to adapt to climate change. With large-scale habitat protection, ecosystem resiliency is maintained and species are provided the time and space to adapt to climate change without the stress of other anthropogenic disturbances. The categorization of these expanded Special Areas as "unavailable for leasing" would protect the extraordinary values of the areas and ensure the continued health of the ecosystem over time providing sufficient buffers to allow for adaptation and resiliency even with changes resulting from a warming climate. It is critical to manage land use in the region in the context of rapid climate change, and we support these measures to do so.

New and emerging scientific information regarding caribou, shorebird, waterbird and raptors support proposed expansions to existing Special Areas, as discussed in the recommendations below. Additionally, we recommend broadening the purposes identified for the expanded Utukok River Uplands Special Area to include wilderness, so as to ensure that the wilderness characteristics of the area – some of the highest contained in the Reserve, including qualities of naturalness and outstanding opportunities for solitude and primitive and unconfined recreation, according to the Draft Plan [48] - are recognized, considered and protected in future management decisions and plans.

Recommendations: Enlarge the existing Special Areas and create a new special area, the Peard Bay Special Area. The proposed changes are based on scientific information regarding the resources of the areas and will provide: better protection for wildlife populations and other special values of the Reserve; improved opportunity for adapatation and resiliency as the climate warms, and will better maintain subsistence resources important to Arctic communities.

We support enlarging the purposes for the Teshekpuk Lake and Colville River Special Areas as proposed in the Draft Plan to include additional important values: 1) protection of important

caribou, shorebird and waterbird habitat, reflecting the original purpose of the Teshekpuk Lake Special Area, and 2) protection of all raptors for the Colville River Special Area, rather than just the protection of peregrine falcons, the purpose identified when the Special Area was originally established. Additionally, the Colville River provides the only high density moose habitat in the Reserve as well as most of the medium density habitat. Moose are a very important subsistence resource, and this warrants inclusion as a value for the Special Area. Last, the Upper Colville River Special Area, especially the extent within the former southern planning area, is also critical to calving, insect relief, and migratory movements of the Western Arctic Caribou Herd.

We also recommend expanding the purposes for the Utukok River Uplands and Kasegaluk Lagoon Special Areas:

For the Utukok River Uplands Special Area we recommend the purposes are expanded to include:

- protecting grizzly bear, wolverine, and wolf values;

- protecting wilderness character, so as to ensure that future management decisions do not impair its character.

As this is the first plan being developed for the southern planning area, we recommend a precautionary approach to management for the entire south planning area, which warrants being managed as unavailable for leasing as it is particularly important for caribou, habitat and subsistence resources important to communities.

[28.011] - For the Expanded Kasegaluk Lagoon Special Area we recommend the purposes be expanded to include protecting its rich wildlife, habitat, wilderness and recreation values including:migratory birds, marine mammals, and Western Arctic Caribou Herd migration corridors;

- marine tidal flats;

- wilderness character as recognized in the 2004 Northwest NPRA Plan;

- primitive recreation values.

The Expanded Kasegaluk Lagoon Special Area values are extraordinarily significant and warrant being managed as unavailable for leasing. The Kasegaluk Lagoon area has been recognized for its special values and managed carefully for nearly thirty years. [49]

D. Managing for Maximum Protection in Special Areas

For all of the Special Areas categorized as unavailable for leasing in Alternative B, we support that they be managed for maximum protection as is required by the NPRPA. Anything short of this would not constitute maximum protection and would not meet this requirement. Inconsistencies regarding stipulations, required operating procedures, and BMPs as discussed above demonstrate the inadequacies of these management approaches for protecting surface values. They do not meet the standard of maximum protection for the Reserve's Special Areas and values, as is required under the NPRPA. Designating an area "unavailable for leasing" is the only choice offered in the Draft Plan that ensures maximum protection for these Special Areas and values.

Recommendations: We recommend that all Special Areas in Alternative B categorized as "unavailable for leasing" remain unavailable for leasing in the Final Plan in order to achieve the requirements in the NPRPA to provide maximum protection for these areas and their special values.

We further recommend that "unavailable for leasing" receive a full definition for this management allocation as discussed in the Background section, including the definition's provisions regarding prohibited infrastructure as shown on Map 2-2. [50] **[28.012]** We urge that as part of the maximum protection standard for lands unavailable for leasing, that it be made

clear that this designation's provisions are not subject to waiver, exception, or modification. This is different than waiving, excepting, or modifying the surface protection requirements (stipulations and BMPs) included in the Draft Plan.

E. Wild and Scenic Rivers

We are pleased that the BLM has fulfilled is duty to consider potential additions to the National Wild and Scenic Rivers System during this land use planning process. As you mention in the Draft Plan, "it would be difficult to argue that any particular river in the south NPR-A did not possess outstandingly remarkable values, given the unique and remote setting when evaluated in a national context, and the near necessity for recreationists to use rivers to move through the area in the summer." [51] BLM found 12 rivers eligible for consideration of Wild & Scenic River status because of their outstandingly remarkable values (we identify additional values for some of these, see below). Protecting these rivers from large-scale, permanent industrial development is perhaps the most important thing we can do to ensure that these recreation, subsistence, and wildlife values are passed on to future generations.

Wild and Scenic River designation is a good tool to this end. All 12 nominated rivers occur at least partially within the expanded Utukok River Uplands or (Upper) Colville River Special Areas. Protection of these rivers is essential to the integrity of the watersheds at large and the values of the Special Areas. Therefore we urge BLM carry forward the 12 rivers as included in Alternative B with determinations as suitable and to recommend them for Congressional designation as "Wild" rivers. This step, when combined with the unavailable for leasing designation for the Special Areas, as proposed in Alternative B, will provide meaningful conservation results into the future from this first ever Plan for these remarkable areas in the South NPR-A having little, if any, oil and gas potential.

[28.013] We believe that the BLM's plan would be strengthened by the inclusion of more site-specific information on these rivers. The Draft Plan's analysis does not do justice to these incredible waterways (see Table 3-32, Vol.1, page 426). It would also be helpful if the rivers proposed for Wild and Scenic River designation could be labeled in all maps, as many names are not shown. **[28.014]** We support adding Subsistence to the outstandingly remarkable values of the Nigu, Etivluk, and Utukok Rivers and Recreation to these for Driftwood Creek in the Final Plan (these should be added to Table 3-32); [52] please supporting descriptions regarding the 12 rivers submitted in detailed comments by Northern Alaska Environmental Center, although for some of the rivers we did not have sufficient information at hand to assess their outstandingly remarkable values for subsistence. Most, but not all, of the studied rivers have Inupiaq names but in recognition of their extraordinary cultural values, it would be appropriate for all of them be identified by their Inupiaq names.

Recommendation: We urge the BLM to adopt its conclusion presented in Alternative B that "all 12 eligible rivers be found suitable and recommended for inclusion in the National Wild and Scenic Rivers System, to be managed as Wild Rivers." [53] We strongly support the speedy inclusion of these 1,135 miles of river corridor into the Wild and Scenic Rivers System where they must be managed to remain "free flowing and unpolluted," [54] and to protect their outstandingly remarkable values. These criteria are incompatible with oil, gas, gravel mining, water reservoirs construction, and other activities and development. While the recommendation from this plan for Wild and Scenic River management does not legally preclude development, in order to seriously protect these rivers "for the benefit and enjoyment of present and future generations," we urge you to determine that these 12 rivers are suitable for inclusion as Wild Rivers and recommend them in the Final Plan. We urge you to do this for both in areas where Alternative B allocates the Special Areas as unavailable to leasing, as well as those segments of the Utukok, Kokolik, and Awuma Rivers not so designated in Alternative B.

As the BLM notes, these regions will face stress due to climate change over the life of the plan. Oil and gas drilling will exacerbate this stress and contribute to climate change and is unacceptable in Wild and Scenic River areas. Alternative B is the only alternative that meets

the BLM's stated purpose and need in this plan when it comes to preserving wild river values and providing maximum protections of these values within Special Areas. Its full set of conservation measures, including determination as suitable and recommendations for all 12 rivers for inclusion as Wild Rivers in the national system will also better protect the environment, public use of the land, and public health.
Each of the 12 rivers found eligible and included in Alternative B is important in their own right and contains intrinsic values. As a whole system, the tributaries and major drainages comprise one of the last whole and pure watersheds in our world. Inclusion of these rivers in the National Wild and Scenic River System, through designation as "Wild" for these individual rivers is a good and necessary step in preserving this precious balance for the future.

F. BLM Needs to Adequately Address Lands with Wilderness Characteristics

As discussed in detail in TWS' scoping comments, BLM is required to specifically address wilderness characteristics in its plan for the Reserve including through inventory, impact analysis, and alternatives for protective management. We applaud the BLM for incorporating and adopting the 105 (c) Wilderness Study as part of this plan, [55] underscoring that not many changes have occurred within the Reserve since the study that have impacted wilderness character, and verifying its findings in the Draft Plan. As primarily wild and intact land, the Reserve possesses extraordinary and significant wilderness values.

The Federal Land Policy and Management Act (FLPMA) requires BLM to inventory and consider lands with wilderness characteristics during the land use planning process. [56] BLM Instruction Memorandum (IM) 2011-154 and Manuals 6310 and 6320 contain mandatory guidance on implementing that requirement. The IM directs BLM to "conduct and maintain inventories regarding the presence or absence of wilderness characteristics, and to consider identified lands with wilderness characteristics in land use plans and when analyzing projects under [the National Environmental Policy Act]."

While BLM's management of the Reserve is not subject to FLPMA's specific provisions governing preparation of resource management plans, [57] it is subject to other requirements of FLPMA that direct consideration and management of wilderness values, including:

- inventorying the public lands for their resources; [58]
- managing the public lands on the basis of multiple use, which is defined to identify the importance of various aspects of wilderness character (such as recreation, wildlife, natural scenic values); [59]
- managing the public lands for multiple use provides for "the use of some land for less than all of the resources"- i.e., not all uses are appropriate or needed in all places; [60] and
- in managing the public lands, considering the relative values of these resources but "not necessarily for the combination of uses that will give the greatest economic return." [61]

In preparing the plan for the Reserve, BLM is obligated to evaluate impacts to and management of lands with wilderness characteristics as an identified resource. Because of the challenges inherent in re-inventorying the entirety of the Reserve and BLM's previous conclusion in the 1978 inventory of the Reserve that "practically all" of the lands in the Reserve have wilderness characteristics, we propose that BLM specifically consider managing the following areas, identified as "the more outstanding choices" in the 1978 inventory based on their high wilderness values, to protect their wilderness characteristics:

- De Long Mountains/Arctic Foothills
- Utukok River Uplands
- Teshekpuk Lake Area
- Colville River Valley

- Kasegaluk Lagoon
- Ikpikpuk River Corridor

In the Draft Plan, the BLM states that:

The vast majority of the Reserve retains characteristics of wilderness and many scoping comments recommended protecting wilderness characteristics. The plan will consider these wilderness characteristics in light of the input of all interested parties and the mandates of the NPRP Act. [62]

The BLM's evaluation of wilderness characteristics focuses on the six areas identified above and confirms their wilderness characteristics, and also notes that four of these areas (Utukok River Uplands, Colville River Valley, and Kasegaluk Lagoon) are already designated as Special Areas. [63] A portion of the northern end of the Ikpikpuk River corridor is included in the Teshekpuk Lake Special Area as it exists today, and Alternative B does include all of the northern portion of the Ikipikpuk River corridor in the Expanded Teshekpuk Lake Special Area.

The river corridor south of the Teshekpuk Lake Special Area boundary, however, is not considered for designation as a Special Area in the Draft Plan. The DeLong Mountains/Arctic Foothills are included in the proposed expanded Utukok River Uplands Special Area in Alternative B, and Alternative C proposes the DeLong Mountains/Arctic Foothills area as "unavailable for leasing," without designating it a Special Area.

The Draft Plan, in fact, does not include lands with wilderness characteristics as a land allocation or a standalone management consideration. Instead, the Draft Plan focuses on managing areas as "unavailable for leasing," indicating that this management approach, which also restricts new non-subsistence permanent infrastructure, would protect wilderness characteristics. [64] By contrast, during the Bush Administration, the Northwest NPR-A considered three areas for wilderness designation and provided a rationale regarding its authority and responsibility to do so.

In the case of the DeLong Mountains/Arctic Foothills area, which the Draft Plan recognizes as containing, "the highest value wilderness characteristics in the Reserve, [65] the Draft Plan does the following:

1. Alternative B proposes the DeLong Mountains/Arctic Foothills area as part of the expanded Utukok River Uplands Special Area, and proposes this area as "unavailable for leasing," along with other high-value Special Areas, but does not include wilderness as a land allocation or standalone consideration.

2. Alternative C similarly does not include wilderness as a land allocation, and by comparison, proposes the DeLong Mountains/Arctic Foothills area as "unavailable for leasing" without designating it a Special Area. As a policy matter, Alternative C is inconsistent, as it recognizes the DeLong Mountains/Arctic Foothills area to have, "the highest value wilderness characteristics," but does not include wilderness as a land allocation or standalone management characteristic and, in spite of its high wilderness value, does not propose this area as a Special Area. This does not meet the requirements of the NPRPA.

While the organizations represented on this letter do not disagree that managing areas as unavailable for leasing is one of the most important management tools BLM has to protect wilderness characteristics in the Reserve, BLM nevertheless has a requirement to include lands with wilderness characteristics as a land allocation or standalone management consideration.

Overall, Alternative B would have the lowest long-term and short-term impacts on wilderness characteristics, although it would still impair the wilderness characteristics of approximately 3.6 million acres; Alternative C would affect approximately 5.4 million acres; and Alternative D would affect approximately 6 million acres. [66] In discussing the environmental consequences of the alternatives on wilderness characteristics, the Draft Plan points to lands closed to leasing, lands deferred from leasing until 2014 and until 2018, and lands managed as Special Areas. [67]

However, the Draft Plan acknowledges that "the lease stipulations and best management practices do not specifically address wilderness characteristics." [68]

[28.015] While we appreciate BLM acknowledging the wilderness characteristics of the Reserve, generally, and the six outstanding areas in particular, and estimating the effects on lands with wilderness characteristics of the management alternatives, the approach taken in the Draft Plan does not fulfill BLM's obligations. Manual 6320, Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process, applies to BLM lands in Alaska, noting that the applicable management provisions of the Alaska National Interest Lands Conservation Act also apply. [69] The manual requires that BLM address lands with wilderness characteristics in each stage of the Land Use Planning Process. [70]

[28.016] In developing management alternatives for the Draft Plan, BLM must provide "a full range of reasonable alternatives" for lands with wilderness characteristics that includes management prescriptions. [71] In areas where the management decision is not to protect wilderness characteristics, BLM must consider measures to minimize impacts on wilderness characteristics. [72] BLM has not provided specific management approaches to address lands with wilderness characteristics or to mitigate impacts where those values are not being provided.

In evaluating the environmental consequences of management alternatives, BLM must both analyze the effects of management alternatives on lands with wilderness characteristics and the effects of managing to protect wilderness characteristics on other affected resources. [73] In describing the effects of managing lands to protect wilderness characteristics, BLM is specifically required to look at the degree to which protective management for an area enhances other multiple use benefits on or near the area, such as protecting watersheds, habitat, plants, cultural resources, scenic quality, and similar natural values. [74] **[28.017]** The analysis of environmental consequences in the Draft Plan does not evaluate the benefits that protecting lands with wilderness characteristics would have on other resources, which is related to the lack of specific discussion of lands with wilderness characteristics, in general. While we continue to recognize the challenges associated with the substantial acreage with wilderness characteristics encompassed by the Reserve, BLM must still make a reasonable effort to comply with FLPMA and current guidance.

Recommendations: For the six areas identified with outstanding wilderness characteristics, BLM should incorporate specific discussion of this resource, consider a range of management options that includes protection of wilderness characteristics, and incorporate an analysis of the benefits of protection as part of the Final Plan. For lands that BLM is not managing for wilderness characteristics, BLM should ensure that this resource is evaluated and protection considered prior to taking any action that could damage it.

[28.018] The Final Plan should specify that: prior to conducting future oil and gas leasing, permitting any future surface disturbing activity, or designating travel routes or access rights-of-ways, BLM shall evaluate potential effects on and management implications for wilderness characteristics that may be affected by the proposed activity in an environmental document prepared subject to the National Environmental Policy Act, by taking the following actions:

- inventorying the potentially affected lands to determine whether they possess wilderness characteristics and/or confirming that there are not significant changes in conditions and that the potentially affected lands continue to possess wilderness characteristics;
- analyzing the direct, indirect and cumulative impacts of the proposed activity on potentially affected lands with wilderness characteristics;
- analyzing the potential benefits of protecting lands with wilderness characteristics from the proposed activity;
- considering management changes to proactively manage the area to protect its wilderness characteristics; and

- where the BLM has determined not to manage an area to protect its wilderness characteristics, and where BLM has determined that the proposed activity should move forward, evaluating methods that can be incorporated into project approvals to mitigate projects' impacts to the lands' wilderness characteristics and adopt appropriate mitigation where warranted.

G. BLM Needs to Address Problems with its Development Assumptions

Because it is difficult to visualize and quantify what the impacts of development might be under each alternative, and because BLM does not provide spatially explicit development scenarios in the Draft Plan, TWS spent considerable time developing a probabilistic oil and gas development scenario model (Attachment A). This effort, in itself, allowed us to visualize where and how development might occur based on the assumptions and lease stipulations/BMPs in the Draft Plan. To account for uncertainty in where oil and gas might be found, we ran 100 scenarios for each alternative. We then overlaid the scenarios with a Resource Selection Function analysis for the Teshekpuk Lake Herd [75] and used calving season disturbance coefficients from the literature [76] to measure both the direct and indirect impacts to high value caribou calving habitat. We encourage BLM to use the information in Attachment A in selecting a preferred alternative and preparing the Final Plan. [77]

This evaluation of the alternatives in the Draft Plan is primarily based on the impacts to Teshekpuk Lake caribou calving habitat because those are the data that TWS has quantitatively evaluated. Other species and values discussed previously will be impacted differently under each alternative.

TWS appreciates the comprehensive literature review provided in the Draft Plan addressing the majority of previous studies that have documented the impacts of oil and gas development on caribou. Previous studies make clear that female caribou with calves are sensitive to disturbance and can be displaced and/or energetically stressed. This may have population level implications, especially if alternative habitat is unavailable. The results of the Resource Selection Function analysis for the Teshekpuk Lake Herd suggest that habitat similar to what females appear to have preferred for the past 6 years [78] or more [79] does not occur in similar concentrations elsewhere within the Reserve.

Further, proximity of the calving grounds to insect-relief areas along the coast minimizes the energy expenditure required for this critical migration. TWS appreciates that the Draft Plan addresses the impacts of infrastructure on insect-relief habitat and migration corridors between the calving grounds and insect-relief habitat. Our development impacts model suggests that there is a greater likelihood of pipelines disrupting the migration corridors under Alternatives A, C and D. [80] Because leaseholders likely will advocate for the shortest pipeline distances and changes or exceptions to stipulations, including the building of roads adjacent to pipelines, [81] the Draft Plan inadequately characterizes the impacts of allowing leasing under Alternatives A, C and D by making likely erroneous assumptions about how pipelines will be designed.

Our concerns about development impacts extend to the Western Arctic Herd as well. Because the Draft Plan assumes there are no oil accumulations in Economic Zones 230, 320 and 330, there is no analysis of the impacts of oil on caribou calving and summer migration corridors in the Draft Plan.

Recommendations: In its Final Plan, BLM should more thoroughly examine likely development scenarios under Alternatives A, C and D in areas delineated as the Teshekpuk Lake Special Area/Unavailable for Leasing under Alternative B. This examination should include an analysis of anticipated impacts in the event that those assumptions which BLM presents in section II.E. are demonstrated to be incorrect. Also needed are more comprehensive justifications for the assumptions contained in the Draft Plan. Additionally, because habitat similar to what female caribou appear to have preferred for the past 6 yrs or more does not occur in similar concentrations elsewhere within the Reserve, we request that BLM address this important point

in the Final Plan as a benefit provided by Alternative B and an important limitation of Alternatives A, C and D.

H. BLM Should Strengthen Lease Stipulations and Best Management Practices

Recommendations: The Lease Stipulations/BMPs that apply to key wildlife and fish habitat (K Stipulations) should be strengthened across all alternatives in the following ways:

[28.019] • Roads should be explicitly prohibited outside of oil and gas fields. This recommendation is consistent with the assumptions in the plan that roads would not be built alongside pipelines connecting oil and gas field developments with regional oil transmission pipelines. Prohibiting further road development is important to minimizing impacts on wildlife and fish. If this is not done, then the environmental analysis must presume that all pipelines will have roads.

[28.020] • Exception clauses should not be permitted. The BLM should consistently enforce stipulations and BMPs. Allowing waivers, exceptions, or modifications complicates management, leaves management practices open to interpretation and politics and, generally, weakens the protection of important habitat.

I. BLM Should Use a Lower Market Price for Oil

[28.021] The Energy Information Administration (EIA) estimates that the market price of oil will be $125 per barrel in 2035, [82] not the $180 per barrel figure used by BLM in the Draft Plan. With this 31% lower estimate, it's likely that substantially less oil would be produced under any of the alternatives.

Recommendation: BLM should provide estimates of undiscovered conventional oil for each alternative using $125 per barrel oil as the market price, and use this information in its comparison of the various alternatives. We do not object if BLM also analyzes the impacts of the $180 per barrel figure.

J. Classification of Pipelines and Implications for Leak/Spill Prevention

The Draft Plan uses the term "gathering lines" in numerous places, which the state of Alaska Department of Environmental Conservation no longer uses, now identifying all pipelines as either flowlines (i.e., pre-oil/gas/water separation) or as transmission lines. The federal government still uses the term "gathering lines" and "regulated gathering lines" in its oil (49 C.F.R. Part 195) and gas (49 C.F.R. Part 192) pipeline regulations, however the federal Pipeline and Hazardous Materials Safety Administration recognizes that the definitions of oil and gas gathering lines require revision including, potentially, elimination of the term to ensure adequate levels of safety and environmental protection for all non-production pipelines. [83] Elimination of the term "gathering lines" at the federal level and classifying all such lines as transmission lines, as is the case at the state level, will ensure increased leak/spill prevention; gathering lines are not as comprehensively regulated federally as transmission lines and, though the situation is better at the state level, state enforcement of pipeline safety rules is minimal to non-existent. Because the state has thought through its pipeline classifications rigorously and because it will minimize confusion, BLM should use the state's terminology for pipelines in the Draft Plan, i.e., using the term "flowline" to represent pre-separation pipelines and "transmission" line to represent post-separation pipelines, thus eliminating all use of the term "gathering line."

Additionally, the Alaska Department of Environmental Conservation's analysis of North Slope spills from 1995-2009 [84] showed that of the 640 loss-of-integrity pipeline spills included in the report, 71 (11%) were from federally-unregulated pipelines. These federally-unregulated pipelines include three-phase lines which can be long-distance "flowlines" or "produced water" pipelines following oil/gas/produced water separation. Federally-regulated transmission pipelines resulted in only 9 (1%) spills in the report.

Recommendations: BLM should eliminate its use of the term "gathering line" in the Final Plan and instead use the pipeline classification methodology developed and used by the state of Alaska. Additionally, **[28.022]** given the high rate of spillage from three-phase lines and produced water, BLM should:

- Require as a BMP separation of oil, gas, and water at each well-pad. This type of separation will occur at offshore platforms, so it's clearly achievable onshore as well, albeit at a potentially higher cost than a more centralized separation facility. Such an approach builds upon the E-4 BMP, however additional language to accomplish this goal is needed, and
- Develop stringent BMPs for produced water pipelines.

K. Missing Oil and Gas Issues in the Draft Plan

[28.023] In its oil and gas spill analyses, BLM did not include the recent Repsol blowout on the North Slope which released approximately 42,000 gallons of drilling mud and an unknown amount of gas. [85] This 2012 blowout caused by a shallow gas pocket would increase the statistical likelihood of a blowout as calculated in the Draft Plan. While the Repsol blowout released drilling mud and not crude oil, this incident – which resulted in a significant quantity of toxic materials on the nearby tundra – should be included in the Draft Plan's Appendix G calculations for Large Crude Oil Spills, [86] as should any drilling mud released previously during other North Slope gas blowouts.

This spill, which impacted about 24 acres, was located on a drilling site in the Colville River delta, and its location next to the river and within a mile of the Beaufort Sea shows the special vulnerabilities of drilling exploratory or production wells in sensitive areas. The Repsol blowout demonstrated the state's and industry's inability to respond under extremely cold conditions. For over two weeks after the spill was reported on February 15, 2012, it was impossible to operate outdoor equipment at the site, including well control equipment, as the temperature and wind chill were too low (i.e., less than minus 35 degrees F. temperature). [87] It took over a month for mechanical well control to take place at the well. The K-3b Lease Stipulation/BMP needs to include language specifying that drilling must stop when winter cold will make spill control and cleanup impossible.

[28.024] In its Appendix G spill analyses, BLM did not analyze toxic chemical spills associated with oil and gas drilling and it needs to. These data are available from the Alaska Department of Environmental Conservation. The North Slope commonly has small toxic chemical spills associated with oil and gas operations.

[28.025] In the section on "Effects on Sociocultural Systems," the Cumulative Effects discussion should include the possibility of increased crime and traffic, higher housing and schooling costs, and related impacts in North Slope communities due to population increases associated with oil and gas drilling. These types of impacts currently are being experienced and studied in lower 48 communities with drilling booms, e.g., in Wyoming from coalbed methane drilling and in North Dakota from shale oil drilling.

[28.026] Last, BLM did not include an analysis in the Draft Plan of the noise resulting from oil and gas operations in the Reserve, including that from compressor operations, and it needs to. In an area of relative quiet, such sounds can travel for miles and impact the solitude and wilderness experience of users.

Recommendation: BLM needs to address the missing oil and gas issues identified in this section in the Final Plan.

Cumulative Impact Issues of Concern:

L. BLM Needs to Develop Management Prescriptions Addressing Climate Change

The BLM has stated that new information on Climate Change is one of the reasons why an Areawide plan has been developed at this time. We appreciate that BLM has incorporated

climate projections into the Draft Plan and attempted to project how climate change may impact biological and physical systems within the Reserve. **[28.027]** We would like to see the Draft Plan lay out a framework to assess climate change impacts and not just minimize and assess oil and gas development impacts. This framework should complement Arctic research across the North Slope in order to be useful in characterizing both local and regional change. This does not have to be nor should it be a significant independent endeavor for the BLM as many other agencies and organizations have done a considerable amount of work to outline key issues, vulnerabilities and data gaps for the Arctic, including but not limited to the North Slope Science Initiative, the Arctic Landscape Conservation Cooperative, the Arctic Council, Study of Environmental Arctic
Change (SEARCH) at UAF and more.

BLM should provide a framework for addressing climate change impacts throughout the life of the plan

[28.028] We applaud BLM on its evaluation of the impacts from climate change in the Draft Plan, as required by the National Environmental Policy Act and Secretarial Order 3289. BLM should now use this analysis to inform an Assessment, Inventorying and Monitoring Plan that will help managers understand how the biological and physical character of the Reserve is changing. This information can then be used in making management decisions that increase the resiliency of wildlife and helping species adapt to climate and development impacts. While there is no agreed-upon approach to management that leads to a more adaptable environment, we recommend using a risk management approach in order to reduce vulnerability, exposure, and uncertainty in the planning area (see Attachment B).

BLM has the authority to manage for risk in the face of climate change

FLPMA gives BLM the authority to manage and plan for the emerging issues and the changing conditions that global climate change will cause in the planning area. FLPMA mandates that when BLM revises land use plans, it must "use and observe the principles of multiple use and sustained yield set forth in this and other applicable law." [88]

The term "multiple use" means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions. . . a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources. . . and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output. [89]

Additional pertinent requirements of FLPMA that specifically apply to land use planning include using "a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences; consider[ing] relative scarcity of the values involved; and weigh[ing] long-term benefits to the public against short-term benefits. [90] FLPMA also provides that BLM must "take any action necessary to prevent unnecessary or undue degradation to managed resources." [91] Collectively, the provisions of FLPMA highlighted above necessitate on-the-ground implementation of climate change policies and adaptation strategies.

The impacts of climate change should be a major factor in every alternative that is created since it is an undeniable reality that will drive all land use planning decisions. As provided in the Oregon/Washington BLM State Office guidance document Instruction Memorandum OR-2010-012, "[r]esource management plans and other broad programmatic analyses are actions that would typically have a long enough duration that climate change could potentially alter the

choice among alternatives." Thus, it is clear that BLM must consider planning for climate change within the context of the broader landscape during the development of the Final Plan.

BLM should take measures, such as vigilant monitoring, to mitigate and adapt to the impacts from climate change under the National Environmental Policy Act (NEPA)

BLM must also include a range of alternatives that includes a strategy for mitigating these impacts. Council on Environmental Quality regulations instruct agencies to consider alternatives to their proposed action that will have less of an environmental impact, specifically stating that "[f]ederal agencies shall to the fullest extent possible: . . . Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment." [92]

Further, **[28.029]** general statements that BLM will conduct monitoring are also not an appropriate form of mitigation. Simply monitoring for expected damage does not actually reduce or alleviate any impacts. Instead, a vigilant science-based monitoring system should be set out in the Draft Plan in order to address unforeseeable shifts to the ecosystems. A detailed monitoring approach is also required under the BLM's planning regulations:

The proposed plan shall establish intervals and standards, as appropriate, for monitoring and evaluation of the plan. Such intervals and standards shall be based on the sensitivity of the resource to the decisions involved and shall provide for evaluation to determine whether mitigation measures are satisfactory, whether there has been significant change in the related plans of other federal agencies, state or local governments, or Indian tribes, or whether there are new data of significance to the plan. The Field Manager shall be responsible for monitoring and evaluating the plan in accordance with the established intervals and standards and at other times as appropriate to determine whether there is sufficient cause to warrant amendment or revision of the plan. [93]

Such vigilant monitoring is absolutely necessary in order to create an effective adaptive management framework in the face of climate change.

The following represents our recommended approach to developing management prescriptions to allow the land and resources to adapt to the impacts of climate change while meeting the agency's legal obligations:

Recommendations: As stated in TWS's scoping comments on the plan, the Reserve's integrated activity plan/EIS provides BLM with an excellent opportunity to develop thoughtful management prescriptions and alternatives that will address how BLM will mitigate climate change impacts and adapt its management over the coming years to prevent permanent impairment and unnecessary or undue degradation to resources. A vigilant science-based monitoring system should be set out in the Final Plan in order to address unforeseeable shifts to ecosystems within the Reserve.

Like other land management agencies, BLM has been struggling to set management prescriptions that mitigate and adapt to additional or exacerbated stressors caused by a changing climate, especially dealing with the factor of uncertainty. In its Fourth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) reviewed a number of impacts on biodiversity associated with anticipated changes in climate world-wide and concluded, "Overall, climate change has been estimated to be a major driver of biodiversity loss in cool conifer forests, savannas, mediterranean-climate systems, tropical forests, in the Arctic tundra, and in coral reefs... In other ecosystems, land-use change may be a stronger driver of biodiversity loss at least in the near term..." but "beyond 2050 climate change is very likely to be the major driver for biodiversity loss globally." [94] The IPCC notes further that, "Although links between biodiversity intactness and ecosystem services remain quantitatively uncertain, there is high confidence that the relationship is qualitatively positive." [95] Thus, the IPCC has concluded that through its influence on biodiversity, climate change is likely to have direct negative consequences on the provision of ecosystem services. In response, the IPCC prescribes

"an iterative risk management process that includes both mitigation and adaptation, taking into account actual and avoided climate change damages, co-benefits, sustainability, equity and attitudes." [96]

Under the pressures of climate change, it must be acknowledged that many objects of conservation are at risk wherever they are found, and the traditional natural resource management paradigm of modifying ecosystems to increase yield must change to a new paradigm of managing wildland ecosystems to minimize loss – specifically loss of the ecosystem composition, structure, and function that yields the benefits we seek from wildlands. Natural resource management must change from a paradigm of maximum sustained yield to a paradigm of risk management.

Although there is no widely-accepted method of assessing and managing risk, we recommend breaking risk down into its component parts—vulnerability, exposure, and uncertainty—as a useful way to think about risk to biodiversity and productive potential. Attachment C includes the recommended approach to addressing climate change in land use planning. We recommend an approach for assessing risk in the Reserve as well as an approach for management of that risk by BLM to comply with its legal obligations under NEPA and FLPMA as set out above. Furthermore, the Final Plan should adequately address greenhouse gas emissions, as well as all other potential sources of air pollution from activities that may take place in the Reserve.

M. Chukchi Sea Oil Development and the Reserve Including Pipeline Issues

The Wilderness Society strongly opposes offshore drilling in the Outer Continental Shelf of Alaska without the following preconditions being met:

1) an adequate wildlife and ecological baseline survey across the Arctic Ocean is performed (the last was in the early 1980's);

2) ecologically-important areas are made exempt from leasing, drilling, exploration and development, as is the case on federal lands;

3) proven cleanup technologies exist; and

4) an effective oversight framework for offshore exploration and development is in place.

TWS and the undersigned recognize that offshore oil and gas development may proceed and that BLM may consider a trans-Reserve oil transportation pipeline request from industry at some point. The Draft Plan rightfully does not indicate routes where an oil transportation pipeline might occur to move oil from the Chukchi Sea coast to the Trans-Alaska Pipeline System. BLM will need to complete a full Environmental Impact Statement prior to allowing a trans-Reserve pipeline to be constructed. In any future Environmental Impact Statement for Chukchi Sea oil transport to the Trans-Alaska Pipeline System, BLM should analyze alternatives to an on-land pipeline including oil and LNG tanker transport for offshore operations in the Arctic which could occur only during the time the ocean is ice-free. The latest oil spill data from the American Petroleum Institute show a significantly lower rate of crude oil spillage by tanker than by pipeline, i.e., onshore and coastal pipelines have a 6 times higher oil spill rate compared to water transport. From the American Petroleum Institute data: [97]

Oil Spillage by Tank Vessels, 1998-2007, crude/non-crude and tankers/barges (data not separated out): 5.28 barrels spilled per billion barrel-miles transport (Table 30, p. 35)

Crude Oil Pipeline Spillage, 1998-2007, crude oil: 32.38 barrels spilled per billion barrel-miles transport (Table 32, p. 38)

This reduction appears to be because of the dramatic reduction in the spill rate for water transport during the past two decades in non-Arctic offshore oil production regions (the Gulf of Mexico); improvement in the pipeline spill rate over this period has been far less dramatic. However, these statistics have limited application to Arctic waters, and we remain extremely concerned about tanker transport, including barging, other vessel, and port operations, in the icy and dangerous waters and weather of the Chukchi Sea.

Should a trans-Reserve pipeline to accommodate Chukchi Sea oil production be proposed in the future, BLM should require that such a pipeline be built in the Reserve without an associated

road. The presence of roads has a significant impact on caribou (see the discussion above). Whereas the presence of a pipeline without a road does not suggest the same severity of impact on caribou, additional studies need to be completed before the impacts of pipelines without roads on caribou are well understood (e.g., effects of helicopter overflights during calving). Moreover, roads provide access to potentially significant numbers of non-local people who can adversely affect fish and wildlife numbers, and there's little available gravel for roads in much of the Reserve. According to the Draft Plan, with a gravel road, the onshore gravel footprint increases roughly 3000%." [98]

As BLM knows, it is possible to operate pipelines without roads in the Alaskan Arctic, and to detect and remediate leaks and spills without roads. The state of Alaska has both leak detection and leak shut-down requirements for crude oil transmission pipelines in its regulations. [99] More sophisticated electronic leak detection systems than those currently required by the state are available commercially. Additionally, it is not at all necessary to have a road alongside a pipeline for spill response as helicopters and snowmachines could be used in the winter for access, and low-ground-pressure vehicles and Hovercraft could be used in the summer. [100]

Despite these possibilities and our recommendation below, however, BLM needs to analyze the cumulative impacts of a Chukchi Sea OCS pipeline crossing the Reserve assuming that it has a road accompanying it (as well as without) in a future Environmental Impact Statement. Outer Continental Shelf leaseholders do not yet have a development plan in place. It is speculative to assume that there will not be a road accompanying the project.

Recommendation: To reduce the footprint and habitat impacts of oil and gas infrastructure construction and operations in the Reserve, if there is to be a trans-Reserve pipeline, that pipeline should not have an accompanying road and this should be a strict prohibition in the Final Plan.

Also, the special risks of pipelines to coastal bays, lagoons, and shorelines must be taken into consideration. The environmental impacts of pipeline construction, operations, and potential spills are of particular concern in coastal areas and shorelines which are highly productive habitats and therefore it is warranted that such facilities be excluded from Special Areas that are unavailable for leasing. Transition zones for pipelines, such as where ocean or lagoons meet the shoreline are prone to high risks that affect pipeline integrity from uneven freezing and thawing of permafrost resulting in differential thaw settlement, seawater incursion, and shoreline erosion which therefore increase risks of spills and environmental damage. As well, spills from buried pipelines would flow directly into productive estuary and nearshore waters.

N. Potential for Shale Oil Development

The Draft Plan dismisses the likelihood of shale oil development in the Reserve for a variety of reasons. Should this assumption prove incorrect, there could be a number of serious environmental impacts that have not been analyzed by BLM including localized air pollution, water use and discharge issues that are different and likely more problematic than conventional oil and gas development, greater habitat footprint through more dense well development, etc.

Recommendation: BLM should be required to complete an additional Environmental Impact Statement before shale oil development begins in the Reserve.

In concluding, for all of the reasons and recommendations stated above, the organizations represented on this letter urge BLM to adopt Alternative B as the preferred alternative in the Final Record of Decision in order to meaningfully protect the Special Areas and values of the Reserve.

Thank you very much for considering these comments.

Sincerely,

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Attachments A, B, and C may be obtained through BLM's Alaska State Office

[1] 42 U.S.C. § 6502.
[2] 42 U.S.C. § 6504(a).
[3] 43 U.S.C. § 1732(b).
[4] 2010 Updated Assessment of Undiscovered Oil and Gas Resources of the National Petroleum Reserve in Alaska (NPRA), United States Geological Survey, Fact Sheet 2010–3102, October 2010, http://pubs.usgs.gov/fs/2010/3102/pdf/FS10-3102.pdf. Without a natural gas pipeline from the North Slope, natural gas accumulations are essentially stranded, so the gas reserve volumes in the USGS report are of less relevance to these comments.
[5] 2011 Consumption, Short-Term Energy Outlook, Energy Information Administration, U.S. Department of Energy, see http://205.254.135.7/forecasts/steo/report/us_oil.cfm.
[6] Shorebirds Breeding in Unusually High Densities in the Teshekpuk Lake Special Area, Alaska; Brad A. Andres, James A. Johnson, Stephen C. Brown, and Richard B. Lanctot; U.S. Fish and Wildlife Service, 755 Parfet Street, Suite 496B, Lakewood, Colorado, 80215, USA.
[7] Draft Plan, Vol. 1, Chap. 3, p. 402.
[8] 42 U.S.C. 6501 et seq.
[9] 42 U.S.C. §§ 6502-03.
[10] Public Law 94-258. April 5, 1976. Naval Petroleum Reserves Production Act of 1976. Sec. 104(b): Any exploration with the Utukok River, the Teshekpuk lake areas, and other areas designated by the Secretary of the Interior containing any significant subsistence, recreational, fish and wildlife, or historical or scenic value, shall be conducted in a manner which will assure the maximum protection of such surface values to the extent consistent with the requirements of the Act for the exploration of the reserve. Public Law 96-514 also held that exploration or production follow Sec. 104(b).
[11] Henri Bisson, State Director, Bureau of Land Management. February 24, 2005. Designation of Addition to Special Areas in National Petroleum Reserve-Alaska {Kasegaluk Lagoon}. 70 FR 9096. The Notice was signed September 8, 2004. See also Gale A. Norton, Secretary of the Interior. January 22, 2004. Northwest National Petroleum Reserve-Alaska integrated Activity Plan/ Environmental Impact Statement. Record of Decision.
[12] 42 U.S.C. § 6506a.
[13] 42 U.S.C. § 6504.
[14] 43 C.F.R. § 2361.1(c).
[15] President Warren Harding. February 27, 1923. Executive Order 3797A. Established Naval Petroleum Reserve No. 4. And see PL 94-258, April 5, 1976).
[16] 43 U.S.C. § 1702(c).
[17] 43 U.S.C. § 1702(c).
[18] 43 U.S.C. § 1702(h).
[19] 43 U.S.C. § 1732(b).
[20] 42 U.S.C. § 6504.
[21] Unavailable and no exploratory drilling or non-subsistence permanent infrastructure (including for potential Chukchi Sea development), except for valid existing NPR-A leases and Wainwright Inlet/Kuk River subsurface pipeline; unavailable areas include the coastal waterbodies' islands and 1-mile inland from Kasegaluk Lagoon and Peard Bay.
[22] "Our technical staff looked at it, analyzed it. I reviewed it and our geologic commissioner looked at it as well so it had quite a few eyes on it and none of us identified shallow hazards. All of that shows is that you can't predict everything," said Alaska Oil and Gas Conservation Commissioner Cathy Foerster. Alaska Public Radio, February 15, 2012, http://www.alaskapublic.org/2012/02/15/state-responds-to-well-blow-out/.
[23] Draft Plan, Vol. 1, Chap. 2, p. 29.
[24] "Except as specifically provided, the BLM requires that all pumpable solid, liquid, and

sludge waste be disposed of by injection…" (emphasis added, Draft Plan, Vol. 1, p. 36) and "Generally, all wastewater spent fluids, and chemicals would be disposed of in injection wells…" (emphasis added, Draft Plan, Vol. 2, p. 36).
[25] "BLM's overall restoration goal," see the Draft Plan, Vol. 3, p. 60. In fact, the G-1 Lease Stipulation on Oil and Gas Field Abandonment states that "The BLM may grant exceptions to satisfy environmental or public purposes." (emphasis added, Draft Plan, Vol. 1, p. 66).
[26] Draft Plan, Vol. 2, Chap. 4, p. 59.
[27] Draft Plan, Vol. 2, Chap. 4, pp. 45-46.
[28] Draft Plan, Vol. 2, Chap. 4, pp.189-190.
[29] Draft Plan, Vol. 2, Chap. 4, p. 42.
[30] Gale A. Norton, Secretary of the Interior, January 22, 2004, Northwest NPR-A IAP/Final EIS, Vol. 1, page II-8; and, Record of Decision, p. 20. The Northwest NPR-A IAP/Final EIS also documented wilderness values, primitive recreation, an area rich in wildlife, including migratory birds and marine mammals, and features marine tidal flats, which are rare on the North Slope for establishment of the Kasegaluk Lagoon Special Area. It also considered several protective strategies for the Kasegaluk Lagoon area, including designation as a Special Area and recommending Wilderness.
[31] Alternative C continues virtually the status quo from the Bush Administration's plan, also represented in Alternative A of the DEIS, the No Action Alternative.
[32] Draft Plan, Vol. 2, Chap. 4, p. 60.
[33] Annual Report 2011, Alaska Dept. of Natural Resources, Div. of Oil and Gas, p. 29.
[34] Table 1.1, Alaska Oil and Gas Report November 2009 (updated May 2010), Alaska Dept. of Natural Resources, Div. of Oil and Gas, p. 8.
[35] Wilson et al. (in review) Shifts in Summer Resource Selection under Varying Environmental Conditions for the Teshekpuk Caribou Herd in Northern Alaska.
[36] Liebezeit JR, Kendall SJ, Johnson CB, Martin P, McDonald TL, Payer DC, Rea CL, Streever B, Wildman AM, and Zack S. 2009. Influence of human development and predators on nest survival of tundra birds, Arctic Coastal Plain, Alaska. Ecological Applications 19(6):1628-1644.
[37] Liebezeit JR, White GC, and Zack S. 2011. Breeding ecology of birds at Teshekpuk Lake: a key habitat site on the Arctic Coastal Plain of Alaska. Arctic 64(1):32-44.
[38] Liebezeit and Zack, unpublished data.
[39] Liebezeit et al. 2011
[40] Liebezeit and Zack, unpublished data.
[41] Audubon Alaska. NPR-A Decision Support Tool. Computer software. Vers. 1.1.3.2. 16 May 2012.
[42] Draft Plan, Vol. 1, Chap. 2, pp. 16-17.
[43] Relevant portions of the Draft RMP are available online at: http://www.blm.gov/pgdata/etc/medialib/blm/az/pdfs/planning/son_des/drmp.Par.36024.File.dat/Chapt-2.pdf.
[44] See, Draft RMP, pp. 70-72.
[45] See, Draft RMP, pp. 79-80.
[46] Kessel and Cade 1956 and 1958, Cade 1960, White and Cade 1971.
[47] Gale A. Norton, Secretary of the Interior, January 22, 2004, Northwest NPR-A IAP/Final EIS, Vol. 1, page II-8; and, Record of Decision, p. 20. The wilderness values of the NPR-A were well detailed in the National Petroleum Reserve in Alaska Task Force, 1978, National Petroleum Reserve in Alaska, Values and Resources Analysis, Wilderness Resources, U.S. Department of the Interior, National Petroleum Reserve in Alaska, 105(c) Land Use Study, Study Report 2, section 4.
[48] Draft Plan, Vol. 1, Chap. 2, p. 21.
[49] BLM, Northwest NPR-A IAP/Final EIS 2003, Map 35.
[50] Unavailable and no exploratory drilling or non-subsistence permanent infrastructure (including for potential Chukchi Sea development), except for valid existing NPR-A leases and Wainwright Inlet/Kuk River subsurface pipeline; unavailable areas include the coastal

waterbodies' islands and 1-mile inland from Kasegaluk Lagoon and Peard Bay.
[51] Draft NPR-A IAP/EIS, March 2012, Vol. 1, page 424.
[52] Draft NPR-A IAP/EIS, Vol. 1, March 2012 page 426.
[53] Draft NPR-A IAP/EIS, Vol. 2, page 448.
[54] Draft NPR-A IAP/EIS, Vol. 2, page 448.
[55] See, e.g., Draft IAP/EIS, Section 3.4.8.3 Wilderness Inventory of the NPR-A, Volume I, p. 428.
[56] 43 U.S.C. § 1711(a); see also Ore. Natural Desert Ass'n v. BLM, 531 F.3d 1114, 1119 (9th Cir. 2008).
[57] 43 U.S.C. § 1712.
[58] 43 U.S.C. § 1711.
[59] 43 U.S.C. § 1702(c).
[60] Ibid
[61] Ibid.
[62] Draft Plan, Vol. 1, Chap. 1, p. 3.
[63] Draft Plan, Vol. 1, Chap. 3, pp. 432-436.
[64] Draft Plan, Vol. 1, Chap. 2, p. 20.
[65] Draft Plan, Vol. 1, Chap. 2, p. 21.
[66] Draft Plan, Vol. 1, Chap. 2, p. 117.
[67] See, Draft Plan, Vol. 2, Chap. 4, p. 312 (discussing effects of Alternative A), p. 452 (discussing effects of Alternative B), p. 560 (discussing effects of Alternative C), p. 667 (discussing effects of Alternative D).
[68] Draft Plan, Vol. 2, Chap. 4, p. 315 p. 312 (discussing Alternative A), p. 452 (addressing Alternative B), p. 563 (addressing Alternative C), p. 670 (addressing Alternative D).
[69] 42 U.S.C. § 6320.06.A.2.d.
[70] 42 U.S.C. § 6320.06.A.2; See also, NPRA IAP/FEIS, 2003, Vol. 1-08 Section 2 pp. II-25 "Legislative proposals to change land status designations were not considered to be within the scope of the IAP/EIS, except to the extent that specific statutes (i.e., the WSRA and § 1320 of ANILCA regarding Wilderness),by their own terms, apply to the NPR-A."
[71] 42 U.S.C. § 6320.06.A.2.d.
[72] Ibid.
[73] 42 U.S.C. § 6320.06.A.2.f.
[74] Ibid.
[75] Wilson et al. (in review) Shifts in Summer Resource Selection under Varying Environmental Conditions for the Teshekpuk Caribou Herd in Northern Alaska.
[76] Cameron et al. (2005) Central Arctic Caribou and petroleum development: distributional, nutritional, and reproductive implications. Arctic 58: 1-9.
[77] TWS staff are willing to work with the planning team during preparation of the Final Plan to explore other management options that might emerge from comments or to change assumptions made in the Draft Plan.
[78] Wilson et al. (in review)
[79] Person BT, Prichard AK, Carroll GM, Yokel DA, Suydam RS, et al. (2007) Distribution and movements of the Teshekpuk caribou herd 1990–2005: prior to oil and gas development. Arctic 60: 238–250.
[80] Wilson et al. (in preparation).
[81] E.g. Alpine Satellite Field FEIS and subsequent decisions.
[82] Annual Energy Outlook 2011, see http://www.eia.gov/forecasts/archive/aeo11/source_oil.cfm.
[83] In this case, production means well-related piping.
[84] North Slope Spills Analysis: Final Report on North Slope Spills Analysis and Expert Panel Recommendations on Mitigation Measures, Nuka Research & Planning Group, LLC for the Alaska Department of Environmental Conservation, 2010, see http://dec.alaska.gov/spar/ipp/ara/documents/101123NSSAReportvSCREEN.pdf.
[85] See the Alaska Department of Environmental Conservation's final Situation Report, http://dec.alaska.gov/spar/perp/response/sum_fy12/120215301/120215301_sr_24.pdf.

[86] Draft Plan, Vol. 4, Chap. 5, pp. 84 ff.
[87] When the temperature increased, Repsol plugged and abandoned the well.
[88] 43 U.S.C. § 1712(c).
[89] 43 U.S.C. § 1702(c) (emphasis added).
[90] Ibid.
[91] 43 U.S.C. § 1732(b).
[92] 40 C.F.R. § 1500.2(e) (emphasis added); see also, 40 C.F.R. §§ 1502.14, 1502.16.
[93] 43 C.F.R. § 1610.4-9 (emphasis added).
[94] Fischlin et al. 2007, p.241
[95] Parry et al. 2007
[96] IPCC 2007, (emphasis added).
[97] Analysis of U.S. Oil Spillage, API Publication 356, August 2009, see http://www.api.org/environment-health-and-safety/clean-water/oil-spill-prevention-and-response/~/media/93371EDFB94C4B4D9C6BBC766F0C4A40.ashx.
[98] Draft Plan, Vol. 3, p. 33.
[99] See 18 AAC 75.055. Leak detection, monitoring, and operating requirements for crude oil transmission pipelines
(a) A crude oil transmission pipeline must be equipped with a leak detection system capable of promptly detecting a leak, including
(1) if technically feasible, the continuous capability to detect a daily discharge equal to not more than one percent of daily throughput;
(2) flow verification through an accounting method, at least once every 24 hours; and
(3) for a remote pipeline not otherwise directly accessible, weekly aerial surveillance, unless precluded by safety or weather conditions. (b) The owner or operator of a crude oil transmission pipeline shall ensure that the incoming flow of oil can be completely stopped within one hour after detection of a discharge.
[100] Draft Plan, Vol. 2, Chap. 4, p. 46.

[Response to 28.001]
Stipulations and best management practices can be subject to waivers, exceptions, and modifications. Designation of lands as unavailable is not subject to waivers, exceptions, or modifications.

[Response to 28.002]
The BLM did analyze alternatives that would protect a broad range of land with wilderness characteristics. See the IAP/EIS's sections 2.4.1, 3.4.8, 4.3.18, 4.4.18, 4.5.18, 4.6.18, and 4.8.18.

[Response to 28.003]
The IAP/EIS provides the appropriate level of analysis based upon reasonable assumptions.

[Response to 28.004]
The analysis of impacts has been modified to address the relative amount of high quality calving habitat that would be available for caribou use under the alternatives.

[Response to 28.005]
In an effort to ensure that the IAP/EIS does not underestimate the impacts that could occur if leased lands are developed for oil and gas production, the BLM has assumed the highest oil and gas prices estimated by the Energy Information Administration, rather than their reference prices for oil and gas. This is explained in section 4.2.1.2.

[Response to 28.006]
The term "gathering line" is defined in Chapter 4, Section title "Future National Petroleum Reserve-Alaska Pipelines." A determination of whether oil, gas, and water would be separated prior to transport to another pad is appropriately made in the course of considering a proposed application.

There are a number of stipulations and best management practices (BMP) related to hazardous substances, including oil and natural gas.
See BMP A-3, BMP A-4, BMP A-5, BMP E-4, and Lease Stipulation E-2

[Response to 28.007]
There are many uncertainties associated with projecting future petroleum exploration and development in the NPR-A. These uncertainties include the amount and location of technically recoverable undiscovered oil and gas as assessed by the USGS. Because the projected oil and gas resources have yet to be discovered, the BLM has made a reasonable assumption that the oil and gas in the economic zones, as defined by the USGS, was distributed evenly within each zone.

[Response to 28.008]
The IAP/EIS assumes that roads may be built to connect GMT-1 and GMT-2 to the Alpine CPF, within the Umiat field, and within joint oil and gas developments. However, consistent with the USGS's 2011 analysis of economically developable oil and gas in NPR-A, BLM has assumed that the very small undiscovered oil and gas development would not be connected by road.

[Response to 28.009]
Pipelines, per se, do not have a disturbance effect on caribou, nor, if built at appropriate heights, do they have a significant effect on caribou movement. The IAP/EIS analyzes the disturbance effects of both facility construction and vehicle (air and ground) activity.

[Response to 28.010]
While the IAP/EIS states that the most likely design would be for gas pipelines to be buried, construction of aboveground gas pipelines is also considered. See Chapter 4, Section title "Future National Petroleum Reserve-Alaska Pipelines."

[Response to 28.011]
KLSA's wildlife habitat for migratory birds and marine mammals, as well as its recreational values, are discussed in the 2004 Northwest NPR-A IAP/EIS, which established the purposes of the special area. The BLM has determined not to expand the size of the special area.

[Response to 28.012]
The Record of Decision will determine what lands are available for leasing. Such decisions can be changed only with a new Record of Decision.

[Response to 28.013]
The level of detail presented is similar to that of earlier plans and is sufficient for the Secretary to make informed decisions on suitability pursuant to the BLM Manual. (MS 6400 3.4, BLM, 2012)

[Response to 28.014]
After reviewing the available information the text was changed to add subsistence as an outstandingly remarkable value of the Utukok.

[Response to 28.015]
The BLM followed Manual 6320. The IAP/EIS gave considerable treatment to the analysis of impacts to wilderness characteristics under a broad range of alternatives. See IAP/EIS sections 2.4.1, 3.4.8, and the impact analysis sections devoted to Wilderness Characteristics for each alternative and the cumulative and subsequent impact analysis in Chapter 4. The BLM has addressed lands with wilderness characteristics at each stage in the development of the IAP/EIS (i.e., prep plan, scoping, Draft IAP/EIS, and Final IAP/EIS).

[Response to 28.016]
The BLM has considered in this plan a full range of reasonable alternatives with respect to lands with wilderness characteristics, including alternatives that would protect wilderness characteristics in a substantial portion of lands that contain them. See IAP/EIS sections 2.4.1, 3.4.8, and the impact analysis sections devoted to wilderness characteristics for each alternative and the cumulative and subsequent impact analysis in Chapter 4.

[Response to 28.017]
The discussion of environmental consequences in the IAP/EIS includes discussions of impacts, or lack thereof, in areas in which impacts to wilderness characteristics are minimized.

[Response to 28.018]
The BLM Arctic Field Office currently and will continue to address lands with wilderness character for any action requiring authorization through the NEPA decision making and disclosure process.

[Response to 28.019]
Prohibition of such a road has been considered, but has not been adopted. One of the purposes of this plan is to provide the opportunity to construct necessary infrastructure to support bringing oil and gas resources from the Chukchi Sea to the Trans-Alaska Pipeline System and/or a future gas pipeline. This infrastructure may require a road that would link NPR-A to the Dalton Highway area. The IAP/EIS analysis has considered the potential impacts of such a road as well as roads linking NPR-A processing facilities with a small number of production pads; other roads in NPR-A are not considered reasonably foreseeable.

[Response to 28.020]
The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques at the time of application for a permit.

[Response to 28.021]
In an effort to ensure that the IAP/EIS does not underestimate the impacts that could occur if leased lands are developed for oil and gas production, the BLM has assumed the highest oil and gas prices estimated by the Energy Information Administration, rather than their reference prices for oil and gas. This is explained in section 4.2.1.2.

[Response to 28.022]
The BLM considered the suggestion. The BLM considers it premature to impose this requirement. Such a requirement could be considered as part of a development decision.

[Response to 28.023]
The text in Appendix G, Section Historical and Statistical Alaska North Slope Blowout Information has been modified to include the Repsol blowout where gas and drilling mud was released. Section 4.2.2.2 discusses loss of well control as a causal factor for a gas release and includes the rate for loss of well control and a gas release. " The gas produced in the NPR-A is expected to be dry gas (no water or condensates). This analysis identifies three general types of potential gas releases: (1) from loss of well control at production areas, (2) from ruptured gas pipelines, and (3) from gas processing facilities. This section summarizes the key variables used for gas release analysis. For further details on any of these points, please refer to appendix G. Loss of well control is estimated at 3.6 x 10-4 gas blowouts per exploration well and 7.0 x 10-4 gas blowouts per development well drilled by the International Association of Oil and Gas Producers (2010). The production well-control incident rate for production of gas is 5.7 x 10-5 blowouts per well year (OGP 2010). While gas blowouts occur at a very low frequency, for purposes of analysis, a well-control incident was assumed to occur and the impacts of a gas release from a well were analyzed." Section 4.2.2.2 Gas releases outlines the scenarios and each resource category discusses the effects under the section title Effects of Spills and Gas Releases. An individual loss of well control incident would not statistically influence the loss of well control rates. The range of alternatives is sufficiently broad to encompass the suggestion. Under some alternatives exploratory drilling and permanent infrastructure necessary for production drilling would be prohibited.

[Response to 28.024]
Since 1998, exploration wells have been drilled using ice pads and/or other removable material and no reserve pits. Development is estimated to occur on gravel pads as well. Should chemical spills associated with oil drilling occur they likely would occur on pad, be cleaned up and generally not impact the environment. All drilling and other wastes have been backhauled out of NPR-A for disposal at permitted disposal sites or for deep well reinjection disposal. The majority of spills, on the Alaska North Slope, are crude and refined oil and saline spills and these three categories collectively represent the largest volume of spills.

[Response to 28.025]
The text has been edited to include the discussion in Section 4.1.1.2: Sociocultural Systems: Future Effects and Their Accumulation: Oil and Gas Exploration and Development Activities.

[Response to 28.026]
Noise was analyzed in the impact sections under seismic surveys, ice roads, pads, airstrips, and snow trails, exploration and delineation wells, and gravel pads, roads and airstrips for each alternative.

[Response to 28.027]
Climate change impacts are being monitored and inventoried in the northern NPR-A where oil and gas activities are likely to occur (began 2002; partners include the University of Alaska Fairbanks, National Weather Service, Natural Resources Conservation Service, and U.S. Geological Survey (USGS). See Section 2.5. Additionally, BLM is a member organization of the North Slope Science Initiative. The BLM uses research from these organizations, as well as the Scenarios Network for Alaska & Arctic Planning in our land use plans. Developing a framework to outline climate change issues and assess further data is beyond the scope of this land use planning effort.

[Response to 28.028]
Climatological resources are being monitored and inventoried in the northern NPR-A where oil and gas activities are likely to occur (began 2002; partners include the University of Alaska

Fairbanks, National Weather Service, Natural Resources Conservation Service, and U.S. Geological Survey (USGS). See Section 2.5.

[Response to 28.029]
The Final IAP/EIS includes additional monitoring and adaptive management requirements.

COMMUNICATION NUMBER 29
John Cornely, Executive Director
Trumpeter Swan Society

THE TRUMPETER SWAN SOCIETY
12615 County Road 9
Plymouth, MN 55441

On behalf of the Directors and over 450 members of the Trumpeter Swan Society (TTSS) I request that you adopt Alternative B in the final area-wide plan for the National Petroleum Reserve-Alaska (Reserve). This is the only alternative in the draft plan that properly balances future oil and gas development with reliable, effective protections for the exceptional wildlife habitat of the Reserve. **[29.001]** TTSS suggests increasing the protected area in Alternative B to include the whole area from the headwaters of Fish Creek due west to the Ikpikpuk River (just above the forks). This would protect a great many more wetland areas important to fish and wildlife. Although TTSS is concerned about the impact on all wildlife species and their habitats in the Reserve, we are particularly concerned about impacts on Tundra Swans.

There is evidence of some migratory birds nesting farther north as the climate changes. This may make the already critical wetland and upland habitats in the Reserve even more critical. Any damage due to fossil fuel extraction in the area when added to the effects of consuming them on the environment would be unacceptable.

[29.002] Insufficient discussion and consideration is given to the prevention or cleanup of small spills (99.9% chance of small spills occurring.

Spanning a large part of the North Slope, the Reserve includes vital habitat for fish and wildlife resources of local, national, and global significance. Congress has specifically recognized that special areas and wildlife values exist within the Reserve and should be protected from oil and gas development.

Alternative B provides essential and appropriate measures to ensure balanced management of the Reserve by protecting these areas: Teshekpuk Lake/Dease Inlet (Teshekpuk lake caribou herd calving grounds and globally-significant Important Bird Area for shorebirds, waterfowl, and seabirds); Peard Bay and surrounding wetlands (a concentration area for marine mammals and nesting waterbirds); Utukok River Uplands/DeLong Mountains (Western Arctic caribou herd calving grounds and habitat for grizzly bears, wolves, and wolverines); the Colville River (exceptional densities of cliff-nesting raptors); and Kasegaluk Lagoon (a unique coastal area vital to polar bears, walruses, and beluga whales; also a globally significant Important Bird Area).

I strongly urge you to adopt Alternative B to protect these special areas with incomparable wildlife values. As you consider the first-ever comprehensive management plan for the Western Arctic Reserve (formally known as the National Petroleum Reserve-Alaska), I ask that you adopt Alternative B and safeguard these natural treasures for all time. Please also include the additional important high value habitats identified by the public, including the upper watershed of Kasegaluk Lagoon, the lower Otukok River, and the upper Ikpikpuk River.

As our country's largest public land management unit at more than 23.5 million acres, the Reserve includes vital habitat areas that support fish and wildlife resources of local, national, and global significance. Under law, Congress has specifically recognized that there are special areas and surface values within the Reserve that should be protected from oil and gas development and has provided clear authority for the Department of the Interior to protect these areas as would be provided by Alternative B.

I urge you to adopt Alternative B in order to provide the most responsible balanced management plan for the Reserve. This option would allow for future oil and gas development

while also safeguarding key habitat areas that are vital to healthy wildlife populations in America's Arctic.

The Trumpeter Swan Society appreciates the opportunity to comment.

Sincerely,
John E. Cornely
Executive Director
The Trumpeter Swan Society

[Response to 29.001]
The BLM considered a broad range of protections, including protections for the wide variety of waterfowl using NPR-A. Under Alternatives B-1 and B-2, much of the land between Fish Creek and the Ikpikpuk River would be unavailable for oil and gas leases. In addition, Stipulation K-2 would require setbacks from many lakes in the area referenced by the comment, providing additional protection for tundra swans, particularly critical nesting habitat. Finally, tundra swan use of the area south of the lands made unavailable for leasing in Alternatives B-1 and B-2 has relatively low density use by tundra swans; see Map 3.3.5-7.

[Response to 29.002]
This comment actually addresses several different aspects of small spills, their prevention, their cleanup and the transport, fate and effects of oil (i.e. what happens to oil). Prevention of small spills is much the same as prevention of large spills, that is, maintain system integrity and compliance with applicable standards through monitoring and oversight of maintenance and operations. The tactics to cleanup oil from small spills are similar or identical to those for large spills as well. The biggest difference is actually the size of the response organization. Finally, the transport, fate and effects of oil from a small spill is also comparable to, but reduced from, that of a large spill. Therefore, the discussion of large spills encompasses the behavior of small spills.

COMMUNICATION NUMBER 30
Steven Sanderson, President and CEO
Wilderness Conservation Society

[Website comment]

The Bronx Zoo-based Wildlife Conservation Society (WCS) appreciates the opportunity to comment on the Department of the Interior's Bureau of Land Management (BLM) Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve – Alaska (NPR-A) (BLM 2012). This important process addresses alternative future management strategies for the United States' largest unit of public land at nearly 23 million acres. As stated by BLM's Alaska State Director, the NPR-A contains resources (wildlife as well as oil and gas) that "must be considered and balanced" as this process moves forward (BLM 3/29/12). Nearly 50 percent of the NPRA subsurface, or 11 million acres would be made available for oil and gas leasing under Alternative B. Based on the scientific data available from WCS and others, Alternative B of the draft IAP/EIS is the best management alternative that provides sufficient and needed protection for wildlife in the most critical areas while providing for the expansion of oil and gas development in the NPR-A.

WCS supports a balanced approach to wildlife and habitat management and oil and gas development in the NPRA. The following WCS recommendations on how to maintain this critical balance are detailed in this submission:

- Designating Lands As Unavailable For Leasing Provides the Appropriate Surface Protection For Wildlife and Habitat.
- Expand the Boundaries of Existing Special Areas to Recognize the Importance of Landscape-Scale Wildlife Management.
- Create A New Special Area at Peard Bay.
- Alternatives A, C and D Are Deficient in Providing Appropriate Surface Protection to Wildlife and Habitat in Special Areas; and No True Cumulative Effects Analysis Was Provided.
- Limit Non-Oil and Gas Development In Special Areas.
- Designate Wild and Scenic Rivers.
- Do Not Undermine Efforts to Protect Wildlife and Habitat with the Construction of a Pipeline Through the NPR-A Special Areas.

[website attachment follows]
June 14, 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99501

Dear Mr. Cribley:

The Wildlife Conservation Society (WCS) appreciates the opportunity to comment on the Department of the Interior's Bureau of Land Management (BLM) Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve – Alaska (NPR-A) (BLM 2012). This important process addresses alternative future management strategies for the United States' Largest unit of public land at nearly 23 million acres. As stated by BLM's Alaska State Director, the NPR-A contains resources (wildlife as well as oil and gas) that "must be considered and balanced" as this process moves forward (BLM 3/29/12). Nearly 50 percent of the NPRA subsurface, or 11 million acres would be made available for oil and gas leasing under Alternative B. Based on the scientific data available from WCS and others,

Alternative B of the draft IAP/EIS is the best management alternative that provides sufficient and needed protection for wildlife in the most critical areas while providing for the expansion of oil and gas development in the NPR-A.

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- Alternatives A, C and D Are Deficient in Providing Appropriate Surface Protection to Wildlife and Habitat in Special Areas; and No True Cumulative Effects Analysis Was Provided.
- Limit Non-Oil and Gas Development In Special Areas.
- Designate Wild and Scenic Rivers.
- Do Not Undermine Efforts to Protect Wildlife and Habitat with the Construction of a Pipeline Through the NPR-A Special Areas.

The NPR-A engulfs most of western Arctic Alaska and contains arguably the most important Arctic wildlife resources in the United States. It has been long recognized, and recently quantified (e.g., Johnson et al. 2007; Liebezeit et al. 2011; Andres et al., in press; Bart et al., in press) that wildlife populations are considerably more diverse and abundant in western Arctic Alaska compared to the east (i.e., the Arctic National Wildlife Refuge). For avian wildlife, this is largely driven by the largest wetland complex in the circumpolar Arctic (CAVM Team 2003) that surrounds Teshekpuk Lake and extends westward into the heart of the coastal plain of the NPR-A. This region contains the most important habitats for nesting birds likely in all the circumpolar Arctic (Andres et al., in press; Bart et al., in press). The NPR-A contains hugely important and distinctive wildlife resources of state, national, and international standards (Zack and Liebezeit, in press).

The ecological value of the NPR-A was recognized in 1976 when the Naval Petroleum Reserves Production Act (NPRPA) transferred management of the reserve to the Department of the Interior. The law (42 USC § 6504a) gave the Secretary of the Interior the authority to designate areas within the NPR-A that contain "any significant subsistence, recreational, fish and wildlife, or historical or scenic value," and afford these areas "maximum protection." The NPRPA (42 USC § 6506a) allows the Secretary to "provide for such conditions, restrictions, and prohibitions" as are "necessary or appropriate to mitigate . . . Adverse effects on the surface resources of the National Petroleum Reserve in Alaska."

Since 1976, four Special Areas have been designated by BLM because of their significant surface (prominently wildlife and subsistence) values: Teshekpuk Lake, Utukok River, Colville River, and Kasegaluk Lagoon. BLM has a history of preventing leasing in and around these Special Areas. Under the George W. Bush Administration, BLM deferred leasing until 2014 on over 1.5 million acres around Kasegaluk Lagoon Special Area and Wainwright, Alaska. Additionally, the Bush Administration prohibited leasing in Teshekpuk Lake and deferred leasing until 2018 on over 400,000 acres north and east of Teshekpuk Lake, owing to concerns of the vulnerability of goose molting areas. The 2010 and 2011 NPR-A oil and gas lease sales Significant portions of the Teshekpuk Lake Special Area (TLSA) were withdrawn from leasing in the 2010 and 2011 oil and gas lease sales due to stated concerns over caribou calving movements and because of high bird diversities and nesting considerations.

WCS is a science-based global conservation organization that brings science to bear on important conservation issues. WCS's role in Alaska began with wildlife surveys in the 1890s (then as the New York Zoological Society) which helped pass laws to control overhunting. WCS has a long history of engagement in Arctic Alaska as well. Surveys supported by WCS in the 1950s led to the creation of the Arctic National Wildlife Refuge. In 2001, WCS reestablished an active on the ground presence in understanding the effects of energy development on Arctic wildlife and, beginning in 2005, commenced studies of nesting migratory birds in the TLSA. In recent conservation studies, WCS has collaborated with BLM, the North Slope Borough, the U.S. Fish and Wildlife Service, Alaska Department of Fish and Game, and others across Arctic Alaska widely and in the NPR-A particularly.

I. Designating Lands As Unavailable For Leasing Provides the Appropriate Surface Protection For Wildlife and Habitat.

BLM concludes that "Alternative B emphasizes the protection of surface resources more than any other alternative, and would be the most favorable for birds." (BLM 2012, Vol. 2, p.392). Alternative B makes the greatest amount of high value bird habitat unavailable for leasing and reduces the need for infrastructure thereby providing the least amount of impact from non-oil and gas development and oil and gas development (BLM 2012, Vol. 2, p.393). Alternative B's designation of certain areas as unavailable for leasing provides the necessary clarity around BLM's intent for future management and development efforts, as opposed to Alternatives A, C, and D that bring development infrastructure that displaces caribou at critical life history stages and attracts increasing nest predators to prey on migratory nesting birds. At the same time, Alternative B provides the greatest area coverage (occurring outside Special Areas) than any of the other 3 alternatives (BLM 2012, Vol. 2, Table 4-11). The U.S. Geological Survey's 2010 (Houseknecht et al., 2010) estimates of the oil resources in the NPR-A downward by an order of magnitude, along with a pattern of oil lease relinquishment in the NPR-A indicate that a designation of unavailable for leasing for these Special Areas would not be detrimental to the expansion of oil and gas development. This balanced approach to maximum surface protection within Special Areas and oil and gas exploration outside Special Areas is WCS's preferred BLM management alternative, Alternative B. Indirect effects associated with oil infrastructure significantly and negatively affect wildlife and only Alternative B protects outstanding and unique wildlife values throughout the NPR-A from these impacts by designating all of the Utukok River Uplands Special Area, most of the TLSA, and the coastlines of the Kasegaluk Lagoon and Peard Bay Special Areas as „unavailable for leasing.'

Studies by WCS and others strongly indicate measureable and negative effects of oil and gas development on Arctic wildlife, in particular to caribou and to nesting bird populations, confirming the importance of making lands unavailable for leasing under Alternative B. These effects are indirect effects resulting from the cumulative effect of infrastructure and associated human activity. The broader context of these concerns is that Arctic wildlife in many ways depends on the historical and geographical remoteness for their life history. The Arctic coastal plain of huge importance to both caribou and migratory birds is a vast, two dimensional environment. The intrusion of oil and gas development thus has measureable affects to populations.

Birds
Overall nest densities of breeding birds at two sites in the TLSA (Olak and on the Ikpikpuk River) were significantly higher compared to 6 other sites located along a 400km portion of the Arctic Coastal Plain of Alaska (Liebezeit et al., 2011, Liebezeit and Zack, unpublished; Fig. 1).

Recent analyses combining data from the Olak site southeast of Teshekpuk Lake (2005-2008) and from the Ikpikpuk River on the western edge of the TLSA (2010-11) make clear that overall bird species diversity was higher at Teshekpuk sites compared to ongoing evaluations in the oil fields (Prudhoe and Kuparuk) (Liebezeit and Zack, unpublished) (Fig. 2).

WCS studies have consistently shown higher nest survivorship for passerines and for some shorebird species at a site in the TLSA compared to oil developed sites to the east (Liebezeit et al. 2009, Liebezeit et al. 2011, Fig. 3). In the most recent assessment combining long-term data sets from two remote sites within the TLSA and the two largest oilfields (Kuparuk and Prudhoe Bay) shorebirds, as a group, have higher nest survivorship at the remote sites. A key covariate driving this result is presence of oilfield infrastructure (Liebezeit and Zack, unpublished data). A broader implication of these nest productivity evaluations suggest that the TLSA may harbor "source" breeding bird populations (providing high reproductive output) while some of the species nesting in the oilfields are comparatively "sink" populations.

Despite efforts by the oil industry to limit the influence of "subsidized predators" (those species – Arctic Fox, Common Raven, and Glaucous Gulls – which have increased in the oilfields), recent evidence indicates that subsidized predators like Glaucous Gulls and Common Ravens are more prevalent in the Prudhoe Bay Oilfield compared to sites in the TLS A (Liebezeit et al. 2011, Liebezeit and Zack, unpublished data, Fig. 4). These higher predator abundances are correlated with lower shorebird nest survivorship (Liebezeit and Zack, unpublished data, Fig. 5). In addition, remotely triggered camera evidence indicates that nest predators at the remote Ikpikpuk River site were less likely to be subsidized predators (56%) compared to at Prudhoe Bay (91%) (Liebezeit and Zack, unpublished data).

Andres et al., (In press) recently documented that the highest densities of shorebirds in the circumpolar Arctic are found in the region around Teshekpuk Lake. Fully 600,000 (10%) of the estimated 6 million shorebirds found across the NPR-A use the TLSA. The highest densities of shorebirds in the Teshekpuk Lake area are clustered around both the south and north sides of Teshekpuk Lake (Figure 6, below)

The TLSA supports significant percentages of the world population of three species of shorebird: Dunlin (arcticola subspp.) 19%; Black-bellied Plover 10%; and Semipalmated Sandpiper (western population) 10% (Andres et al., in press). These numbers easily would qualify this site as a Western Hemispheric Shorebird Reserve Network (WHSRN) of international significance. Bart et al. (in press) provide the first full assessment, from both aerial surveys and ground-based surveys of the distribution and densities of waterfowl, loons, and shorebirds across the North Slope. In these analyses it is clear that the NPR-A, and in particular the coastal plain and environs around Teshekpuk Lake are dramatically important to many species including the three Eider Species (Fig. 7). Note how the region just south of Teshekpuk Lake seems particularly important to King Eiders during the summer months.

A substantial percentage of the world population of Pacific Brant relies upon the Teshekpuk Lake area in the northeastern NPR-A during the vulnerable molt period along with tens of thousands of Greater White-fronted Goose (King and Hodges 1979.) Many other goose species, including populations from Siberia, Canada, and Alaska, molt in the TLSA. Disturbance to molting geese can have strong physiological and demographic effects.

During the breeding season, waterfowl hunting is an integral part of native Inupiaq subsistence based in Barrow. Many of the waterfowl that breed in the TLSA, and the NPR-A at large, winter in the lower 48. These wintering populations are important for sport hunters and wildlife viewers (Fig. 8) and help support those local economies.

The most important breeding ground for the Yellow-billed Loon, a species considered for ESA listing, is centered just west of Teshekpuk Lake (Earnst et al. 2005). Only Alternative B would adequately protect this region.

For birds, infrastructure from oil and gas development brings with it increased populations of Arctic Fox, Common Raven, and Glaucous Gulls, responding to garbage and multiple structures that afford either support for denning or nesting (NAS 2003). The broader context of these concerns it that Arctic wildlife in many ways depends on the historical and geographical remoteness for their life history. Migratory birds that breed in the coastal plain of Arctic Alaska winter worldwide, in every ocean and from every continent. They breed among the most

northerly landscapes on Earth in large part because they are remote: remote from predators, remote from disturbance and do so in the narrowest calendar of summer-like conditions (Zack and Liebezeit, in press a).

[30.001] WCS led an evaluation of the effect of "subsidized" predators of the Prudhoe Bay oilfields on the nest productivity of birds (primarily songbirds and shorebirds) in, near, and distant from existing oil and gas infrastructure (Liebezeit et al., 2009). Our study found for three species: Lapland Longspur, Red Phalarope, and Red-necked Phalarope, that nests within 5 kilometers of oil and gas infrastructure sustained significantly higher rates of nest predation than nests further from oil and gas infrastructure. The very high natural variation in and among sites, and between years across the Arctic precluded further identification of statistical effects on other species.

Nonetheless, it is clear that heightened risk of predation near oil and gas infrastructure is a strong effect of development on nesting migratory birds. This 5 km predation-effect-zone from infrastructure that acts as a strong attractant to predators (either from food or potential nesting and denning sites; see Liebezeit et al. 2009, Table 3) should be incorporated into the BLM plan assessment of environmental consequences including the cumulative impacts section. In the current draft, there is an inadequate evaluation on the potential spatial extent of this issue. WCS studies and supporting anecdotal evidence clearly indicate that stipulations and best management practices that would curtail predator access to food wastes are only minimally effective. WCS has documented significantly negative impacts to multiple birds nest survivorship (Liebezeit et al. 2009) conducted well after the oil industry instituted many measures to limit predator access to food sources.

Wilson, Liebezeit, and Zack (unpublished) have recently modeled the effects of nest loss (based on nest density per habitat type data and the 5 km predation-effect-zone documented in Liebezeit et al. 2009) with respect to development scenarios for each BLM IAP/EIS Alternative in the TLSA. These preliminary results suggest only Alternative B provides adequate protection to limit significant nest loss (Fig. 9).

Caribou

The Teshekpuk Lake Caribou Herd, the herd most important for subsistence by the largest North Slope community (Barrow), spends its entire life history in the region around Teshekpuk Lake. Dr. Ryan Wilson, of The Wilderness Society, has collaborated with scientists from the BLM, North Slope Borough, Alaska State Fish and Game, ConocoPhillips, and Audubon to analyze this caribou herd, its calving habitat, its insect relief areas, and the movement corridors between them. The data are long term (6 years) and provide the most detailed analyses of movement patterns and habitat preferences for this important herd. These collaborative studies, in review (Wilson et al., Summer Resource Selection Patterns for the Teshekpuk Caribou Herd in Northern Alaska, in review) demonstrate that the most high value calving area for this herd occurs in a large region south of Teshekpuk Lake (Fig. 10).

The most important insect relief areas are found immediately north of Teshekpuk Lake, near the Beaufort Sea where cooler windier conditions persist in the summer months (Fig. 11).

The critical corridors of movement between the core calving areas and the insect relief areas are two narrow corridors on the east and west sides of Teshekpuk Lake itself. These corridors provide the critical connectivity of these essential life history activities (Fig. 12).

For caribou, avoidance and displacement of and by oil and gas infrastructure at critical life history stages is the key concern (see below). Caribou seek high nutrition areas free of predators for their calving, and seek coastal areas for insect relief. Displacement and avoidance of oil and gas infrastructure by the Central Arctic herd in the Prudhoe Bay oilfields results in females with calves moving away from productive feeding areas when those areas are in turn near oil and gas development, resulting in lower body weight and less reproductive success compared to those females calving way from oil and gas infrastructure and with access to high quality

feeding areas (Cameron et al., 2005). The overall caribou population size and movement in and out of the oil fields represent a nuanced problem of interpretation. **[30.002]** Indeed, number of caribou in and among the oilfields can be high and give the (misleading) impression that there are no effects of oil and gas development on these animals. Yet the close evaluation of movement and demographic effects by Cameron et al. (2005) make clear that during the critical calving and insect relief seasons, there are strong demographic consequences to caribou when oil and gas development is in high nutritional calving areas and when corridor access to insect-relief areas is crowded with oil and gas development.

In order to understand how the Alternatives of the IAP/EIS may affect the Teshekpuk Lake Caribou Herd, Dr. Ryan Wilson has modeled development impacts on the calving grounds for each BLM plan alternative. The first step in this process was to create oil development scenarios for each alternative based on the estimate number of pads/roads per unit area as described in the BLM plan (Fig. 13).

Next, impacts to caribou through the loss or degradation of high-quality caribou calving from the development scenarios were assessed. From Wilson et al. (unpublished), we see that Alternative B has significantly less core calving habitat lost than all the other alternatives (Fig. 14).

II. Expand the Boundaries of Existing Special Areas to Recognize the Importance of Landscape-Scale Wildlife Management.

Alternative B appropriately expands the boundaries of the four existing Special Areas. Shorebirds and waterbirds would benefit from the 2 million-acre addition to TLSA and the 267,000 acre addition to Kasegaluk Lagoon Special Area (BLM 2012, Vol. 2, p.393). WCS research and others confirm that it is appropriate to modify the purposes of the Lake Teshekpuk and Kasegaluk Lagoon Special Areas to include birds, shorebirds and waterbirds (Liebezeit et al., 2011; Johnson et al., 2007; Andres et al., in press; Bart et al, in press). WCS also agrees that the Colville River Special Area purpose be modified to include all raptors, not just arctic Peregrine Falcons (BLM 2012, Vol. 2, p. 393).

Under Alternatives A, C and D, the wetland complex outside the existing boundaries of the TLSA, would remain open to some degree of potentially harmful oil and gas development. In particular, WCS is very concerned that the wetlands around Dease Inlet, with wildlife populations and diversity much like that surrounding Teshekpuk Lake, would be at risk. Oil and gas development could result in increased populations of nest predators like Arctic fox, common raven and glaucous gulls (NAS, 2003) and negatively affect birds nesting in these wetlands, as WCS has demonstrated for some species (Liebezeit et al., 2009). Only Alternative B would provide the necessary protection of this large wetlands complex by expanding the boundaries of the TLSA and designating the majority of the Special Area as unavailable for leasing.

Emerging concerns of climate change impacts on Arctic wildlife point to the need for large area protection as the key conservation "tool" to buffer against the numerous uncertainties and concerns of deleterious effects of climate change to wildlife (Zack and Liebezeit In Press b). Climate change is occurring faster in the Arctic than in most other places on the earth – at nearly twice the global average (IPCC 2007). Yet it is becoming apparent that implementing wildlife management in the Arctic that mediates climate change impacts will be a big challenge as there are currently no apparent "tools in the toolkit" to mitigate for such impacts (Zack and Liebezeit In Press b). The best option to mitigate for climate change impacts to wildlife in the region is to protect large areas in advance of such changes with the idea that the protection of large areas is the most conservative and best tool available now for wildlife conservation and subsistence protection in a changing world (Halpin 1997; McCarty 2001; Heller and Zavaleta 2009). Alternative B supports this approach.

For example, at current erosion rates, much of the northern half of the Teshekpuk Lake region may completely erode within the next century and/or many of the thaw lakes northeast of

Teshekpuk Lake may be breached by salt water (Mars and Houseknecht 2007, Jones et al. 2009). This habitat degradation and loss would directly impact the important goose molting area in this region and potentially make it unsuitable as a molting ground. In addition, critical insect relief habitat for caribou (R. Wilson, pers. Comm.) and shorebird nesting habitat on the north side of Teshekpuk Lake (Andres et al In Press) would potential be lost or severely degraded. Because of this real threat, it is important to include an adequate buffer of habitat unavailable to oil and gas leasing in the region. Only Alternative B would offer a reasonable buffer of adjacent land for these species to relocate or redistribute their breeding and molting grounds and, in the case of caribou, re-route their migratory pathways. All the other Alternatives provide no such buffers free of development pressures.

III. Create A New Special Area at Peard Bay.

The explicit purpose of a newly created Peard Bay Special Area -- 1.6 million acres in size – would be to protect nearshore waters for shorebirds and waterbirds (BLM 2012, Vol. 2, p. 393). WCS and other's science lend support to the management decision provided in Alternative B, which would designate Peard Bay and 1-mile inland from Peard Bay as unavailable for leasing (BLM 2012, Vol. 1, p. 20). This region, like the TLSA is rich in migratory bird abundance and diversity during post-breeding staging in the late summer (Taylor et al. 2010). Unchecked development would result in increased disturbance to birds as they prepare for the high energetic demands of migration and, would greatly increase the chance of a near shore oil spill that would have significant impacts if it occurred during the pre-migration staging period (NAS, 2003, Taylor et al. 2010). Alternatives A and D would allow oil and gas development in and around Peard Bay following the expiration of the existing lease deferral in 2014 (BLM 2012, Vol. 1, p. 78, stipulation K-3b). Alternative C would impose the same oil and gas leasing restrictions as Alternative B in and around Peard Bay, but would not designate a larger portion of the area as a Special Area, failing to recognize its tremendous value for wildlife (BLM 2012, Vol. 1, p. 78, stipulation K-3b). The designation of a landscape as a Special Area acknowledges the critical role large landscape protection plays in combating climate change impacts on Arctic wildlife.

IV. Alternatives A, C and D Are Deficient in Providing Appropriate Surface Protection to Wildlife and Habitat in Special Areas.

Alternative A would allow oil and gas development throughout the northeastern portion of the TLSA following the expiration of the current oil and gas lease deferral in 2018 and protects no land in the wildlife-rich region south of Teshekpuk Lake. The protection from leasing of only Teshekpuk Lake itself, as included in Alternative A, disregards the importance of the landscape surrounding Teshekpuk Lake that is vital habitat for both birds and caribou.

[30.003] Alternative A acknowledges that habitat loss, disturbance, displacement, predation and direct mortality of bird species would be greater under Alternatives A, C and D but least under Alternative B (BLM 2012, Vol. 2, p.179). "Of all the alternatives, Alternative A is predicted to create the second lowest amount of long-term surface disturbance with Alternative B predicted to cause the least surface disturbance, and Alternatives C and D estimated to cause the most surface disturbance" (BLM 2012, Vol. 2, p. 163). The number of birds displaced from important habitats due to gravel placement and mining activities for oil and gas development and production under Alternative A may be lower than under Alternatives C and D, "although they would be greater than those under Alternative B" (BLM 2012, Vol. 2, p. 164). According to BLM, "Aircraft disturbances would be likely to affect waterfowl and other bird groups in those portions of the NPR-A open to development with the effects of aircraft disturbances likely being lowest in Alternative B, second lowest in Alternative A, with the most disturbances likely in Alternatives C and D" (BLM 2012, Vol. 2, p. 169). Barge traffic potential disturbances to waterfowl are acknowledged to be greatest under Alternatives C and D, and lowest in frequency under Alternative B and A (BLM 2012, Vol. 2, p. 170). Alternative A also recognizes that there are "additive" impacts to birds from non-oil and gas, and from oil and gas exploration and development activities (BLM 2012, Vol. 2, p. 179). Oil and gas fields and the level of development will be greater under Alternatives A, C and D, while least under Alternative B

(BLM 2012, Vol. 2, p. 179). Despite these acknowledged significant detrimental impacts to birds in Alternative A, the BLM concludes with insufficient evidence, "[t]he sum effects from all activities authorized under [A]lternative [A], barring a large oil spill, would likely produce no measureable effect on migratory bird populations of any species" (BLM 2012, Vol. 2, p.179).

[30.004] Alternative A bases several of its conclusions on incomplete information. For example, there is no evidence to support the finding that ground based seismic surveys for oil and gas exploration during winter months would "likely have no direct impacts on most species" (BLM 2012, Vol. 2, p. 161). Habitat loss or alteration (the enduring seismic tracts and the tundra effect are but one example) that occurs during the winter months must be taken into consideration. **[30.005]** Nor is there evidence to support the finding that "it is very unlikely that aircraft traffic would cause more than a minor temporary disturbance to a few individual birds" (BLM 2012, Vol. 2, p. 161). Also **[30.006]** there is no evidence that locating winter ice roads and pads away from sensitive areas would reduce degradation of bird habitat, contrary to the findings in Alternative A 4.3.8.2 Oil and Gas Exploration and Development Activities (BLM 2012, Vol. 2, p. 162). Furthermore, there's **[30.007]** no scientific evidence to confirm that water withdrawals from lakes for the development of ice roads will naturally recharge themselves, as proffered by BLM (BLM 2012, Vol. 2, p.178).

Alternative C acknowledges that the articulated bird impacts related to habitat loss, disturbance, displacement, predation and direct mortality is least in Alternative B (BLM 2012, Vol. 2, p.495). While Alternative C provides stipulations and best management practices that provide protection to surfaces resources superior to Alternative A, BLM finds that "[a]s there has been no oil and gas development yet in the NPR-A, it's difficult to determine the effectiveness of the best management practices and stipulations" (BLM 2012, Vol. 2, p. 502). Alternative C likewise protects the lake and offers no protection of the land around it, again making this Alternative insufficient for wildlife conservation. Elsewhere, the coastal plain protections of Alternative C outside the TLSA (south and east of Barrow, the new Peard Bay Special Area, and the expansion around the Kasegaluk Lagoon Special Area) are worthwhile for wildlife, yet are also covered in Alternative B, WCS's recommended management Alternative. The protection in Alternative C afforded in the Brooks Range to the far south of the NPR-A offer little for wildlife conservation as that region is comparatively poor for wildlife values and concerns.

Alternative D provides no surface protection and thus no wildlife protection from development. **[30.008]** There is a failure of the purported cumulative effects analysis (BLM 2012, Vol. 3) to fully contrast the alternatives with respect to wildlife resources. The "effects" discussed are qualitative, frequently vague, and tremendously inadequate for the purpose of the IAP/EIS. There is no true "cumulative" evaluation provided for any effect or scenario raised, and certainly no additive elements to the overview in quantitative form. Finally, there is no real "analysis": there is but a narrative discourse of miscellaneous potential effects, and no integration of effects to address whether synergistic or additive effects might come to the fore with development scenarios in key areas, particularly the wildlife-rich region south of Teshekpuk Lake so sensitive for caribou and for migratory birds. Most importantly, **[30.009]** the absence of spatially-explicit data (wildlife locations from survey data, key habitat data, etc.) in the purported "cumulative effects analysis" in the IAP/EIS is a critical omission. WCS has provided references to spatially explicit data sets on the distribution and abundance of wildlife in the NPR-A (Johnson et al., 2007; Andres et al., in press; Bart et al, in press; Wilson et al., in review) that would provide the basis of a true cumulative effects analysis.

Further, WCS has offered some preliminary analyses based on spatially explicit data of wildlife in the TLSA and modeled effects of proposed development scenarios that contrast the Alternative B versus Alternatives A, C, and D. Those preliminary results are compelling, and provide a glimpse at the power of true cumulative effects analyses in revealing contrasting wildlife conservation implications of the different scenarios. There is a growing literature on cumulative effects analyses that couple wildlife data, habitat data, and infrastructure variables

(e.g., Theobald et al., 1997), including an analysis of boreal caribou and development that offers guidelines in constructing analyses for understanding the spatial implications of displacement of caribou by structures (Dyer et al., 2001). **[30.010]** The absence of spatially explicit wildlife information (on diversity patterns, density, key seasonal habitat, movement corridors for caribou) in the draft cumulative effects section of the IAP/EIS makes this section inadequate in properly addressing specific effects to key wildlife species and groups, and thus fails to address cumulative effects of development in Alternatives A, C, and D.

V. Limit Non-Oil and Gas Development In Special Areas.

The absence of spatially explicit wildlife information (on diversity patterns, density, key seasonal habitat, movement corridors for caribou) in the draft cumulative effects section of the IAP/EIS makes this section inadequate in properly addressing specific effects to key wildlife species and groups, and thus fails to address cumulative effects of development in Alternatives A, C, and D, as noted above.

VI. Designate Wild and Scenic River

Alternative B recommends Congressional designation of 12 Wild and Scenic Rivers including the Colville, Nigu, Etivuluk, Ipnavik, Kuna, Kiligwa, Nuka, Awuna, Kokolik, and Utukok rivers and Driftwood and Carbon creeks (BLM 2012, Vol. 1, p. 21). It is appropriate to provide these streams, lakes and coastal riparian areas the special protections delineated in Table 2-2 and Table 2-3 to ensure they can continue to serve the ecological function they have historically served in the larger landscape.

VII. Do Not Undermine Efforts to Protect Wildlife and Habitat with the Construction of a Pipeline Through the NPR-A Special Areas.

The scope of the IAP/EIS includes providing "the opportunity, subject to appropriate conditions developed through a NEPA process, to construct necessary onshore infrastructure, primarily pipelines and roads, to bring oil and gas resources from leases in Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope (BLM 2012, Vol. 1, p. 1). BLM considered but eliminated such alternatives that would not provide for such infrastructure as BLM concludes it would be outside the scope of the IAP/EIS (BLM 2012, Vol. 1, p. 32). If such future infrastructure is developed, WCS urges that it not be located in or near Special Areas. Special Areas articulated in Alternative B would afford the greatest protection to surface wildlife resources and any future infrastructure in and around these Special areas would be inconsistent with the intent of the original legal authority, the NPRPA.

VIII. Conclusion

WCS has evaluated the Alternative management plans provided in the draft IAP/EIS and based on the best (including new) available science, concludes that Alternative B is the best Alternative that provides "maximal protection" for wildlife resources in the TLSA. It is the best alternative that balances wildlife conservation with responsible energy development in the largest public landscape in the United States, the NPR-A. The TLSA is the critical geography in the IAP/EIS, as both internationally important wildlife resources and recoverable oil resources occur in this region. As WCS and other science make clear, the TLSA, as modified by Alternative B, contains critical breeding grounds for numerous wildlife species of international importance (including local and national subsistence) and contains the critical calving habitat, insect relief habitat, and corridors for movement between them. Further, the documented effects of development in increasing nest predation pressures on migratory birds and in displacing caribou during critical life history stages clearly indicate that any development in the TLSA will have dramatic negative effects on these critical wildlife resources. Alternative B starkly contrasts with Alternatives A, C, and D in providing the relevant and necessary protection from development in those key wildlife regions of the NPR-A (prominently the TLSA) while providing for development of roughly 50% of the remaining NPR-A. This represents a wise and balanced use of this important BLM managed public land.

Sincerely,

Dr. Steven E. Sanderson

President and CEO
Wildlife Conservation Society

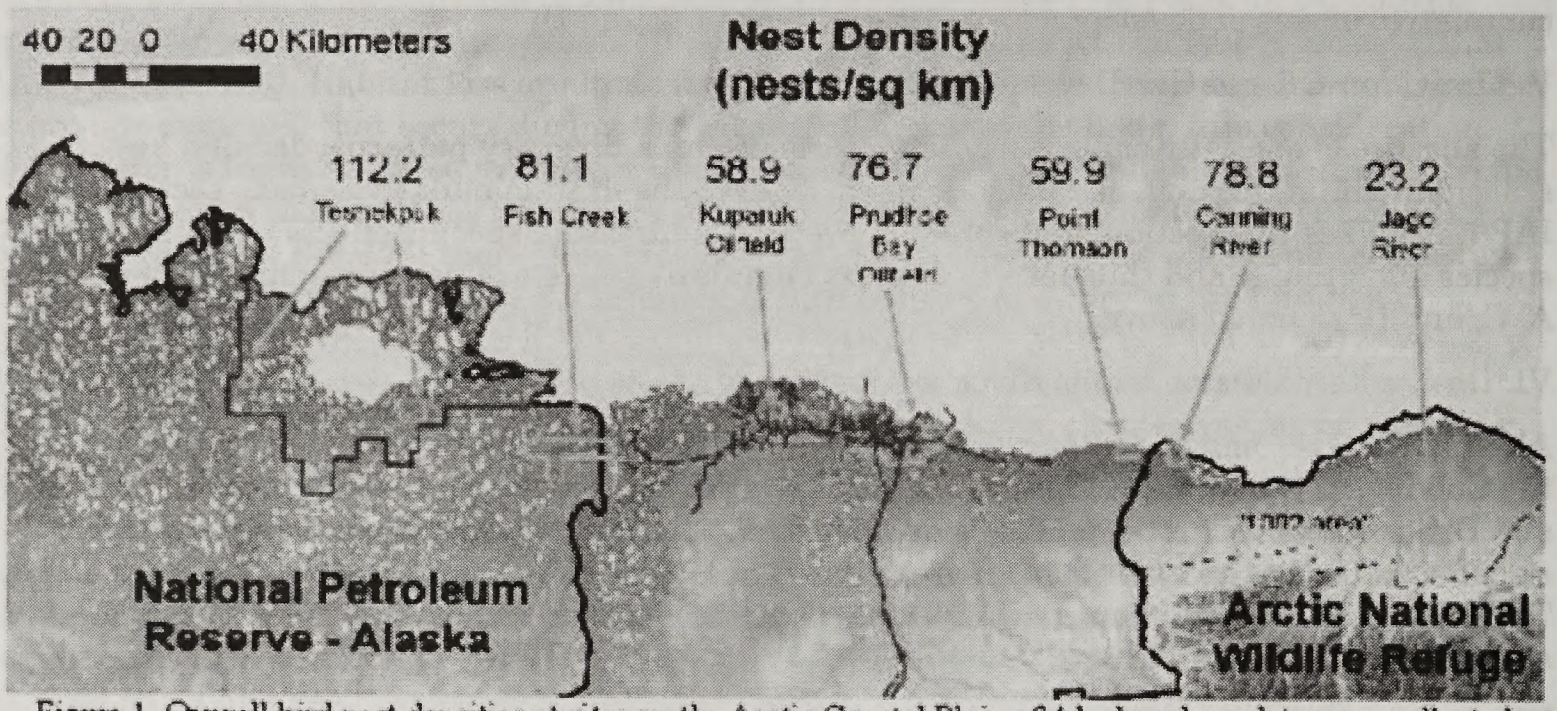


Figure 1. Overall bird nest densities at sites on the Arctic Coastal Plain of Alaska where data were collected using a standardized protocol (from Liebezeit et al. 2011).

Fig. 1

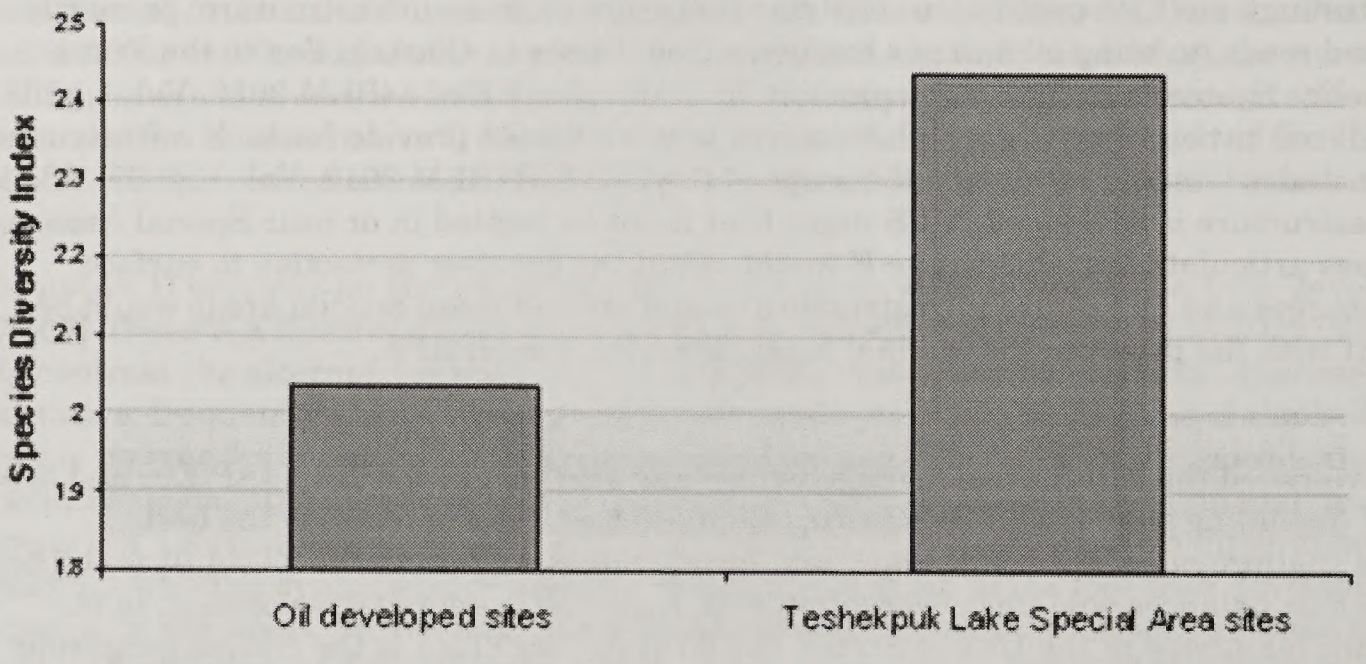
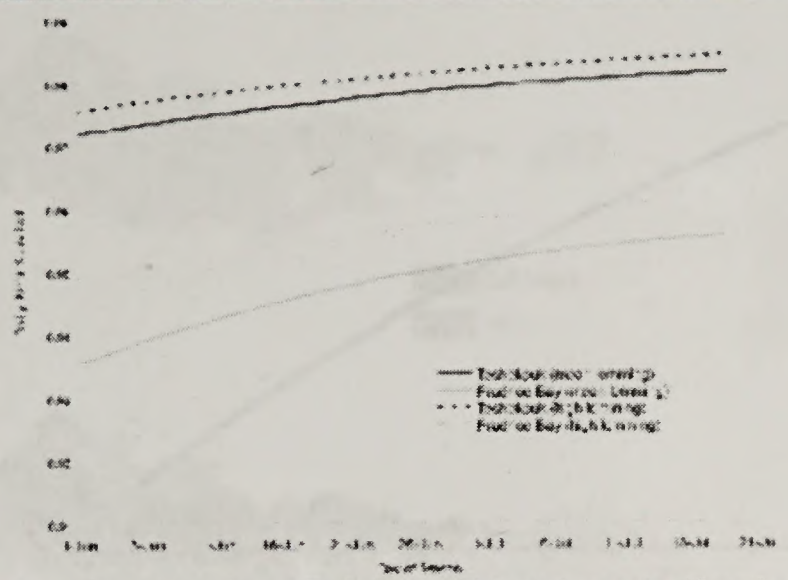
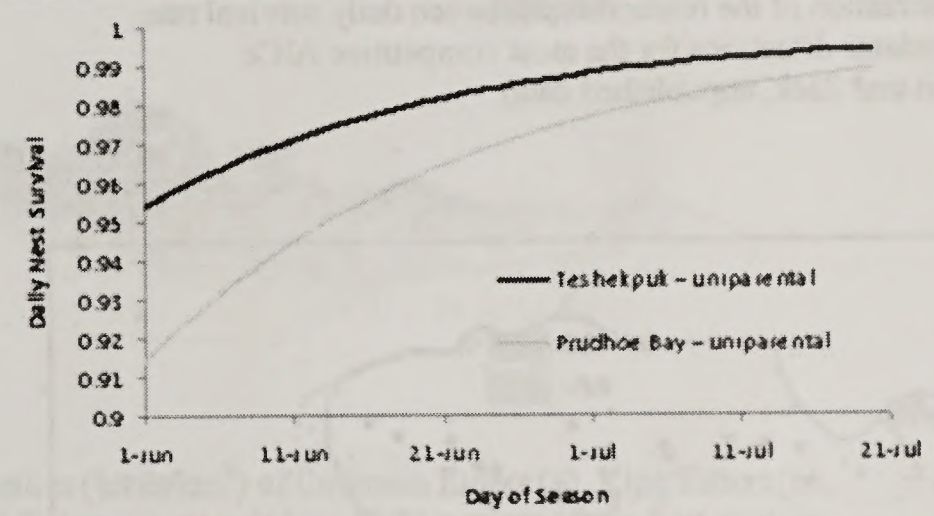


Fig. 2



Passerine nest survivorship at Teshekpuk (Olak site) was significantly higher than in the Prudhoe Bay oil field (lemming abundance also a key covariate in the analysis).



Uniparental shorebird nest survivorship at Teshekpuk (Olak site) was significantly higher than in the Prudhoe Bay oil field (lemming abundance and time of season also key covariates in the analysis).

Fig. 3

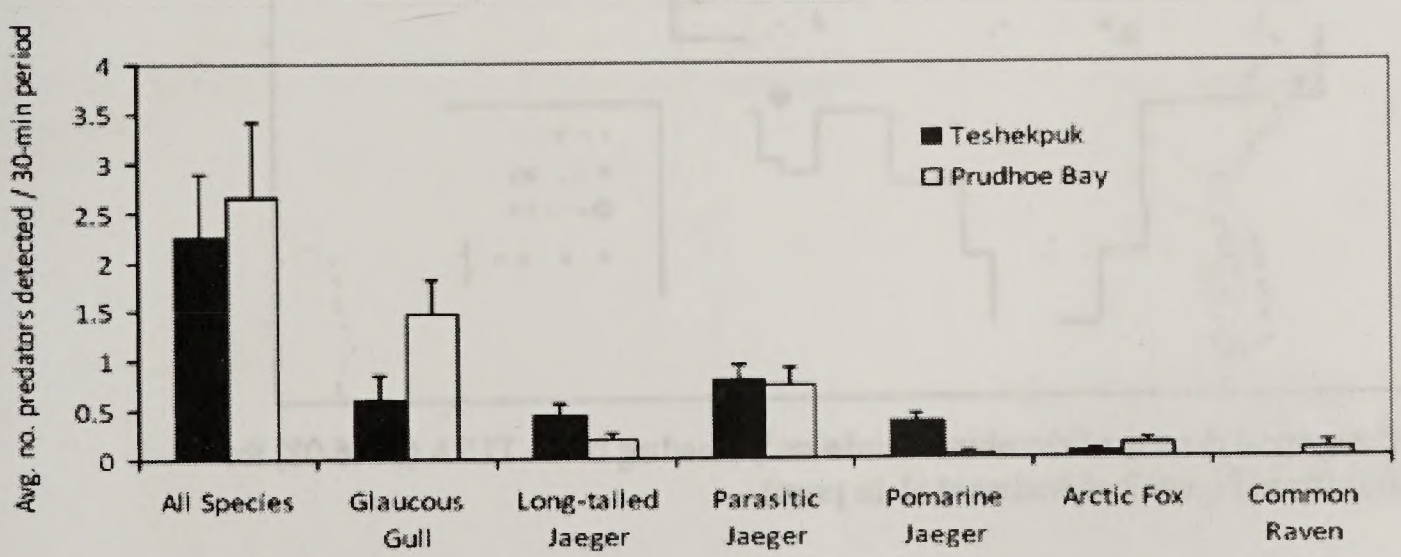


Figure 4. Predator survey results from Teshekpuk (Olak site) and the Prudhoe Bay Oil field site (from Figure 3 of Liebezeit et al. 2011).

Fig. 4

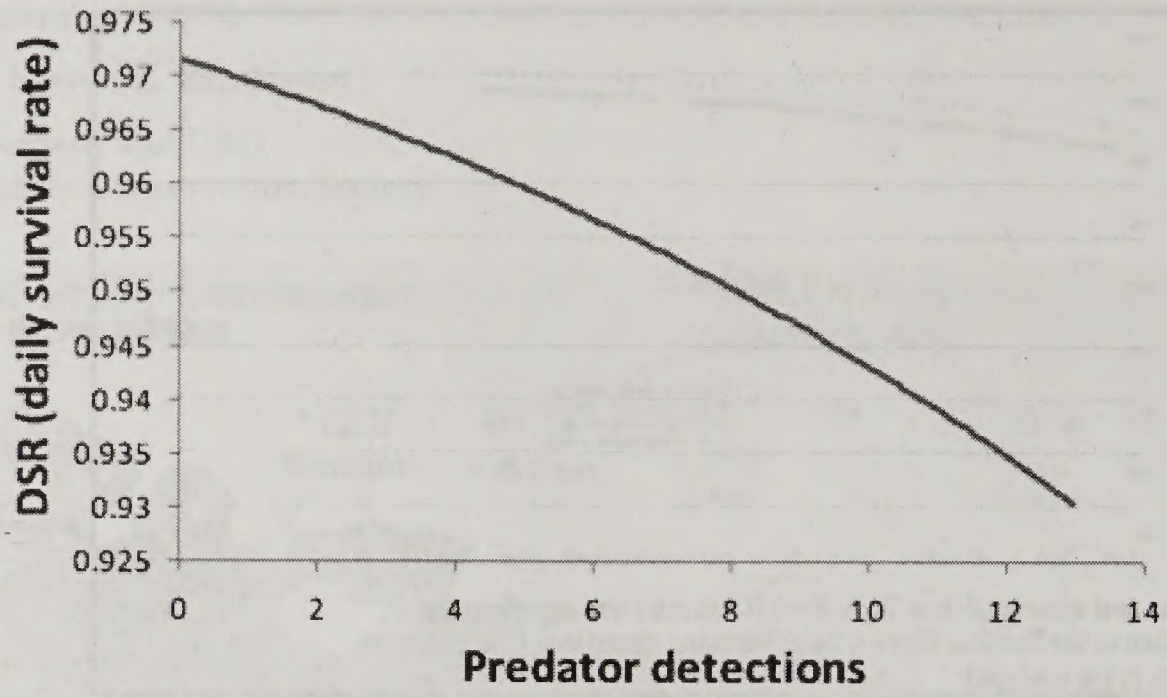


Figure 5. Graphical representation of the relationship between daily survival rate (nest survivorship) and predator detections for the most competitive AICc shorebird model (Liebezeit and Zack, unpublished data).

Fig. 5

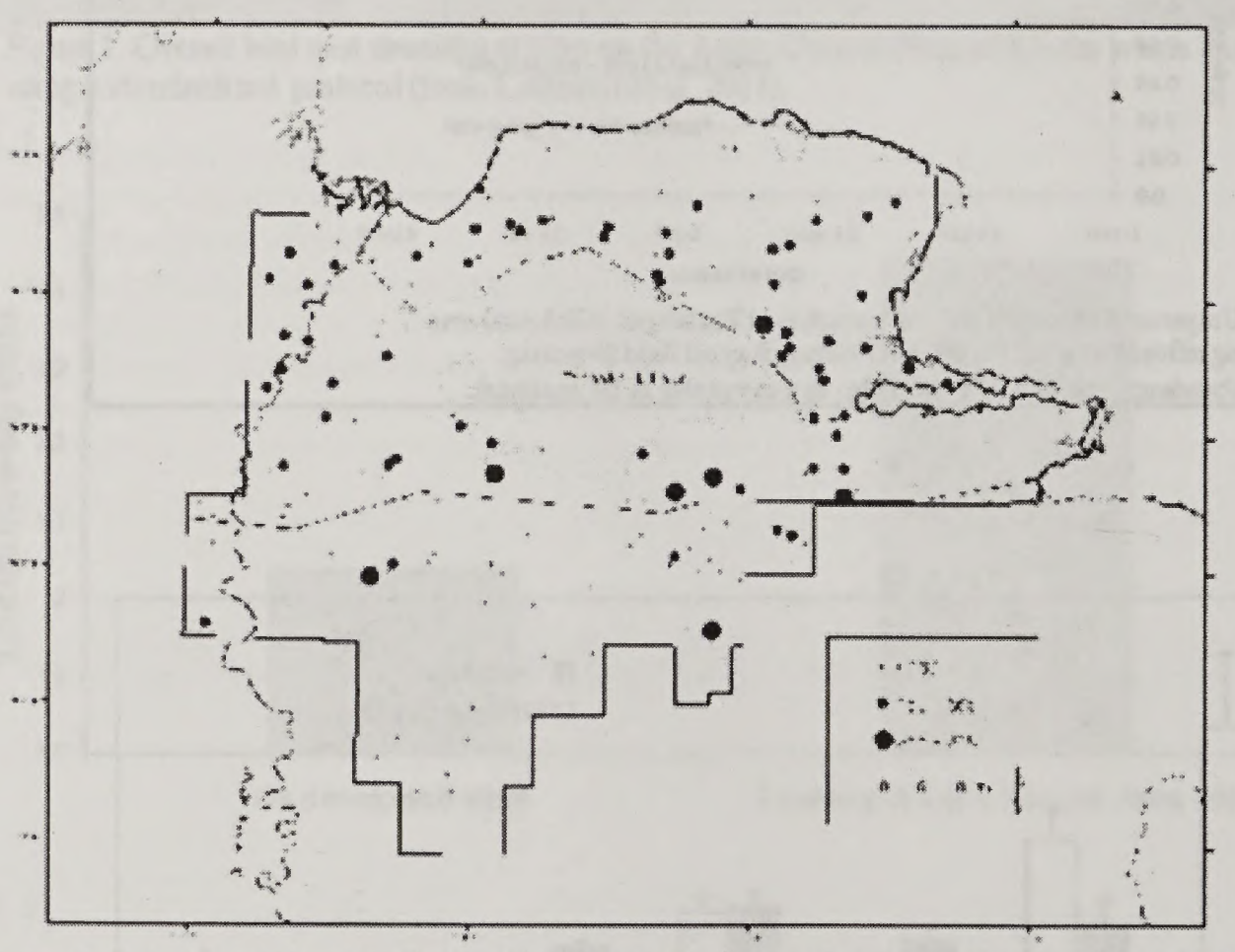


Figure 6. Categorical density of shorebirds (birds/km^2) breeding in the TLSA (2006-08) for all shorebirds (from Figure 2 of Andres et al. in press).

Fig. 6

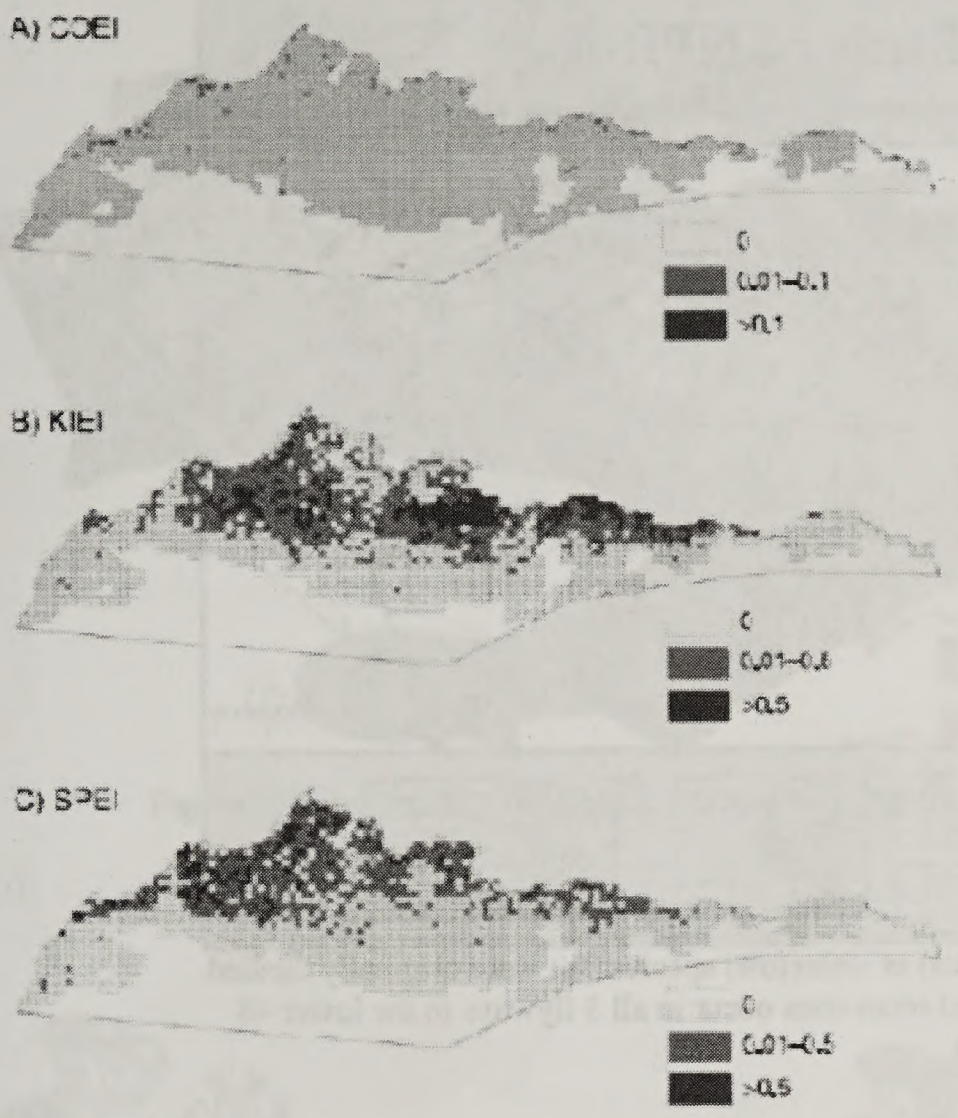


Figure 7. Densities (birds/km^2) of Common Eiders (a), King Eiders (b), and Spectacled Eiders (c) recorded on aerial surveys (from Bart et al. in press – Figure 4.15).

Fig. 7

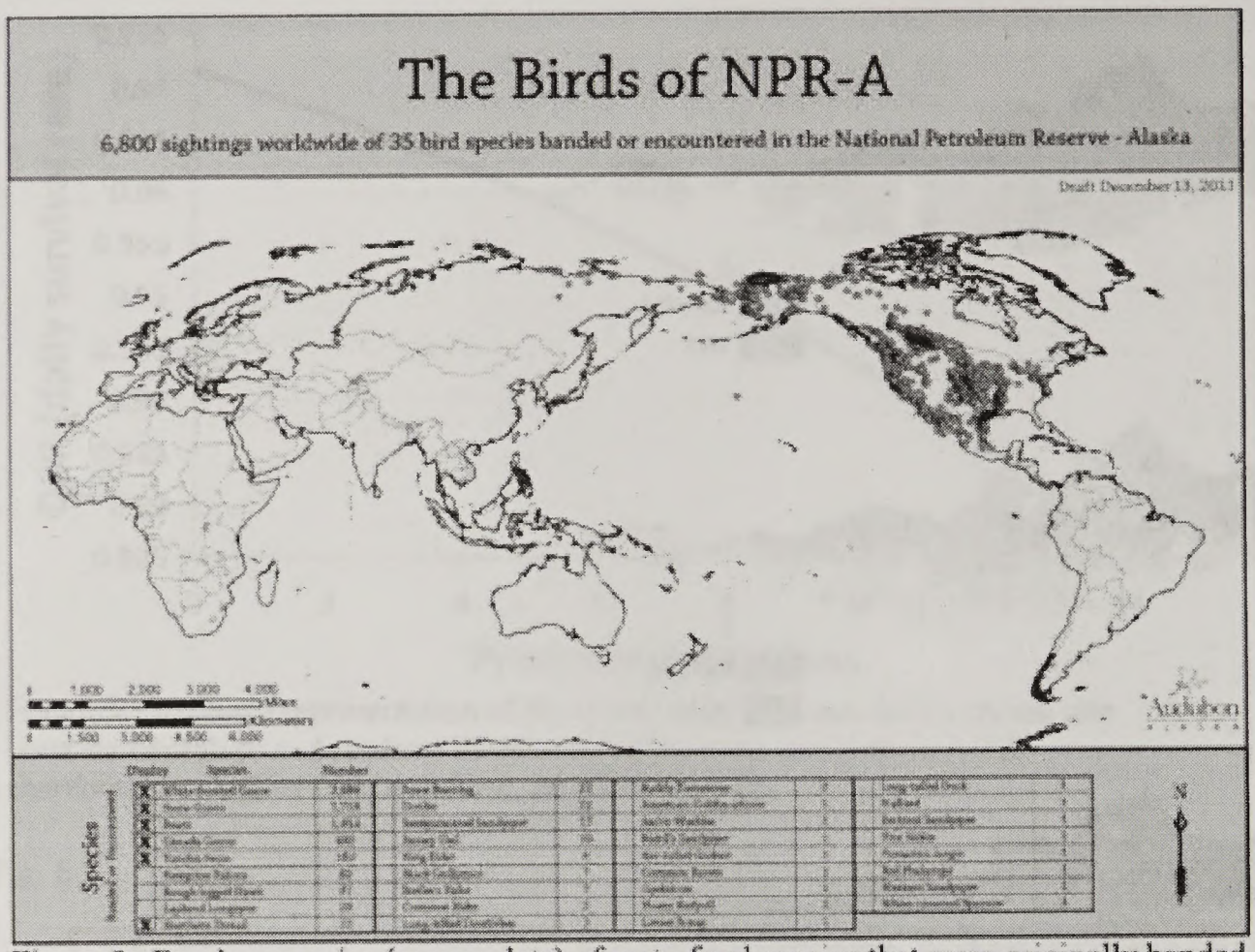

The Birds of NPR-A
6,800 sightings worldwide of 35 bird species banded or encountered in the National Petroleum Reserve - Alaska
Species
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Figure 8. Band recoveries (orange dots) of waterfowl species that were originally banded in the NPR-A. Notice how many band recoveries occur in all 3 flyways in the lower 48 (figure provided by Audubon Alaska).

Fig. 8

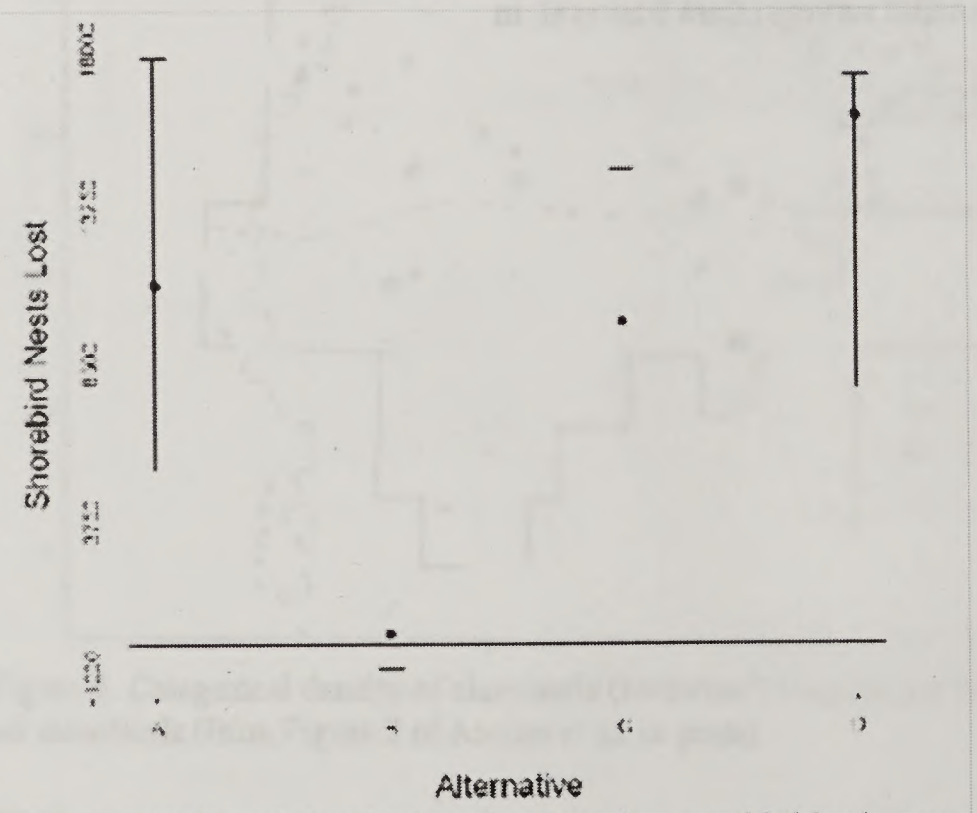

Figure 9. Estimated shorebird nest loss based on actual habitat loss as well as projected nest loss within 5 km of high-attractant infrastructure.

Fig. 9

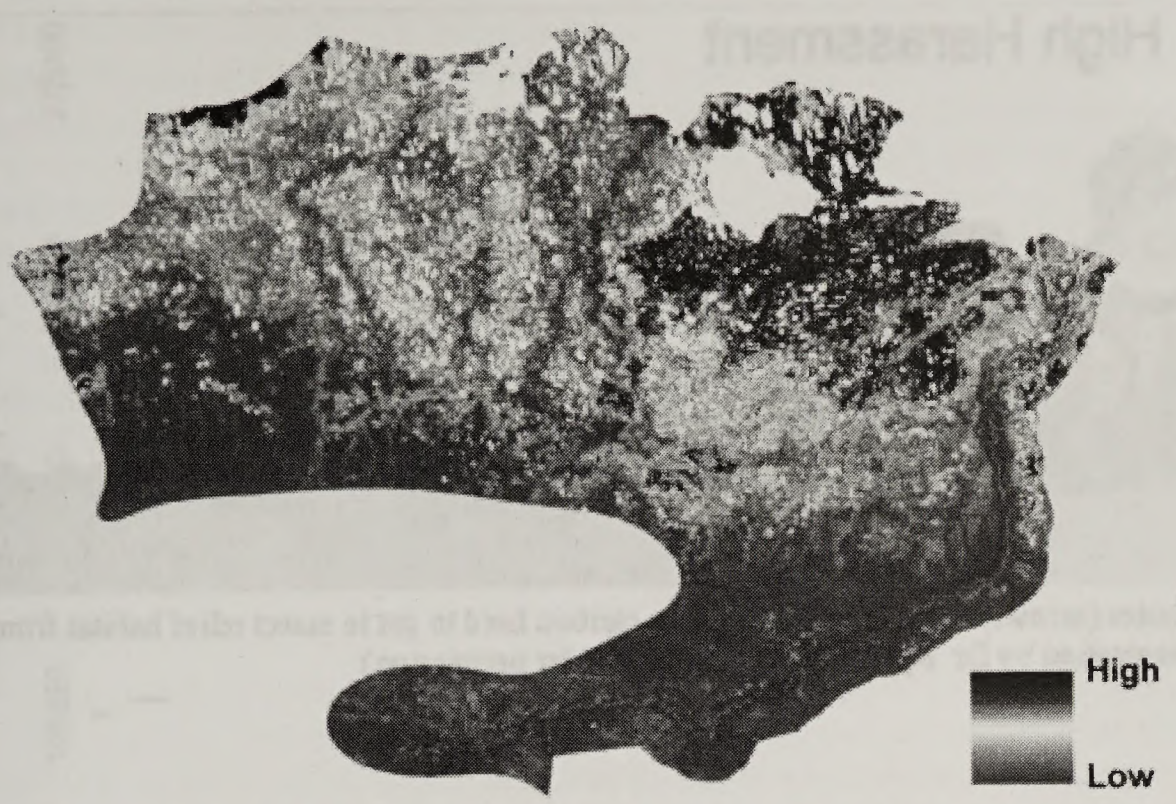

Figure 10. High quality calving habitat (purple) from Wilson et al. in review.

Fig. 10

Figure 11. High quality mosquito relief habitat (high harassment areas left, low harassment areas right) (Wilson et al. in review).

Fig. 11

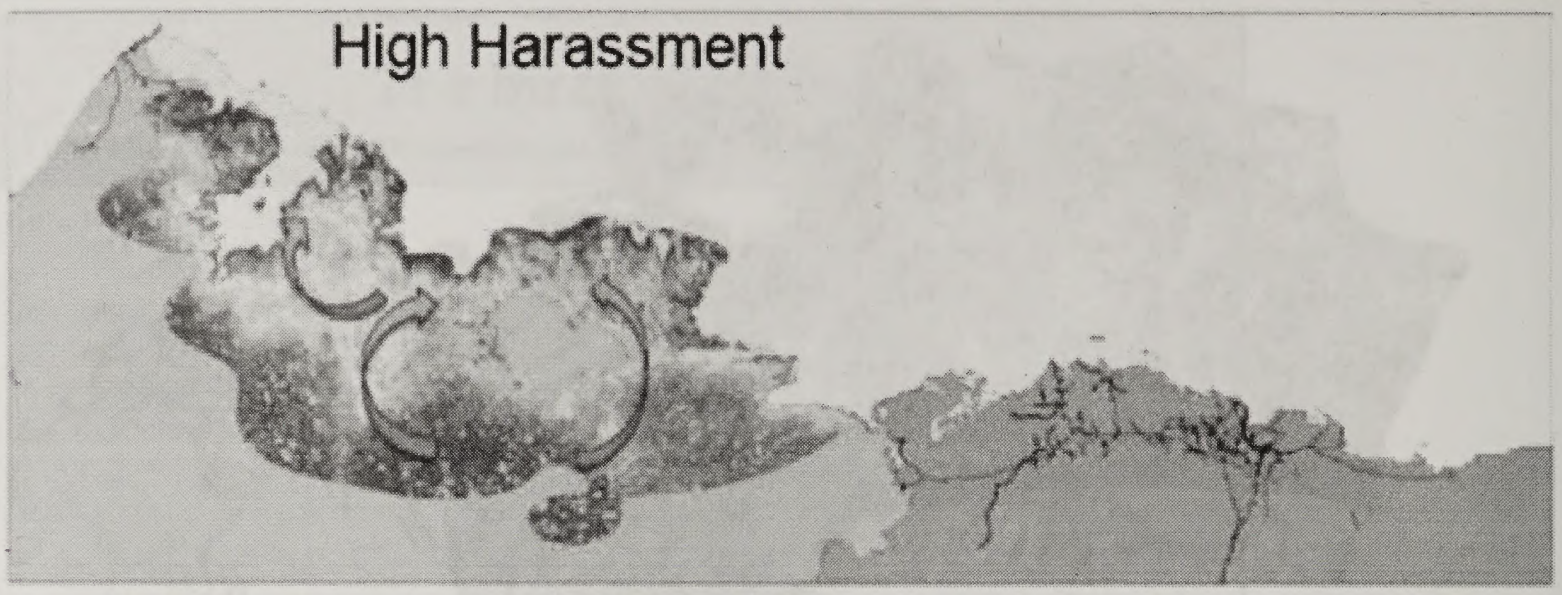

Figure 12. Migration routes (arrows) of the Teshekpuk Lake caribou herd to get to insect relief habitat from core calving areas (from presentation by Dr. Ryan Wilson, TWS, used by permission).

Fig. 12

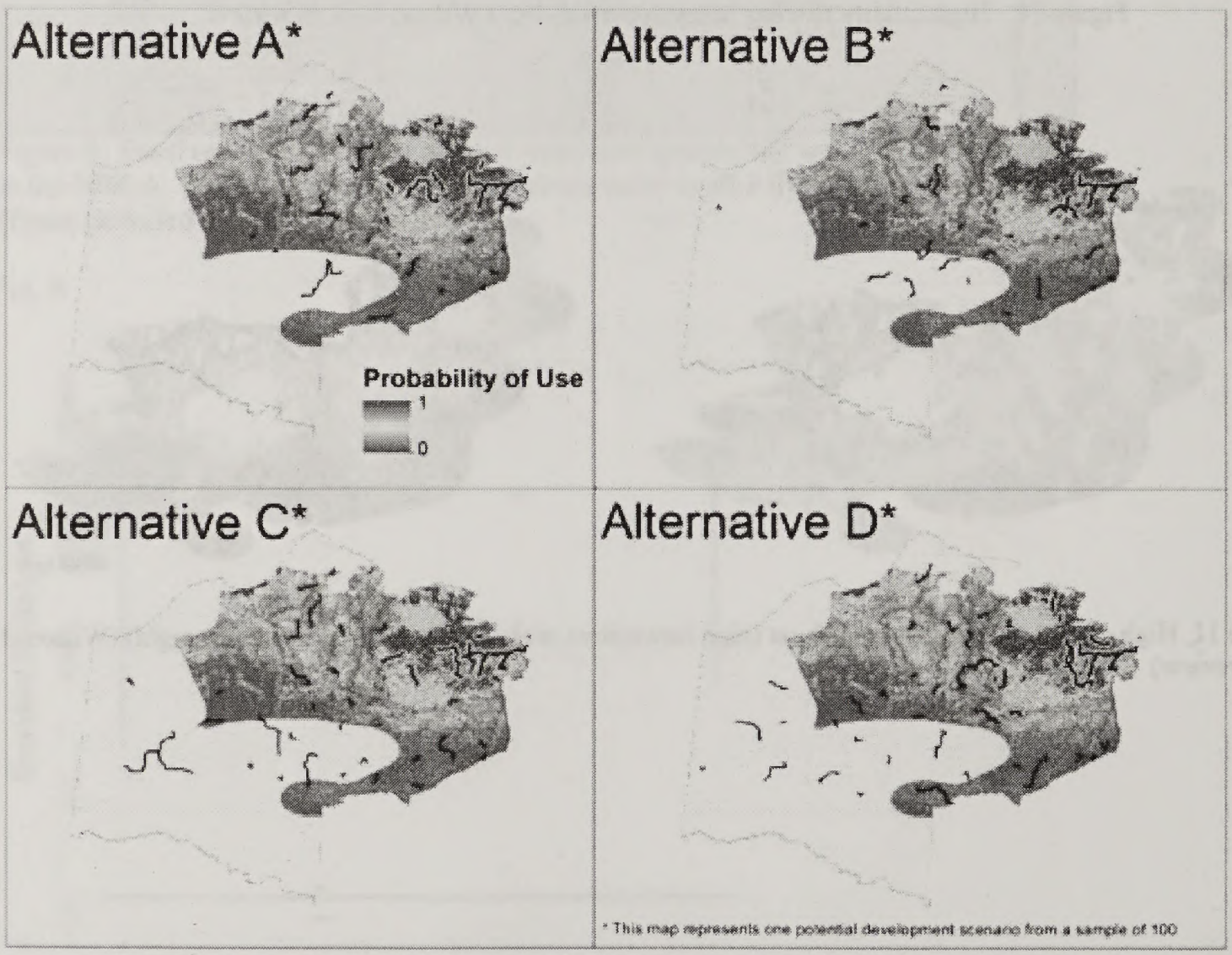

Figure 13. Estimate of the extent of oil development infrastructure in each BLM plan alternative overlain on caribou calving habitat (red = highest quality calving habitat).

Fig. 13

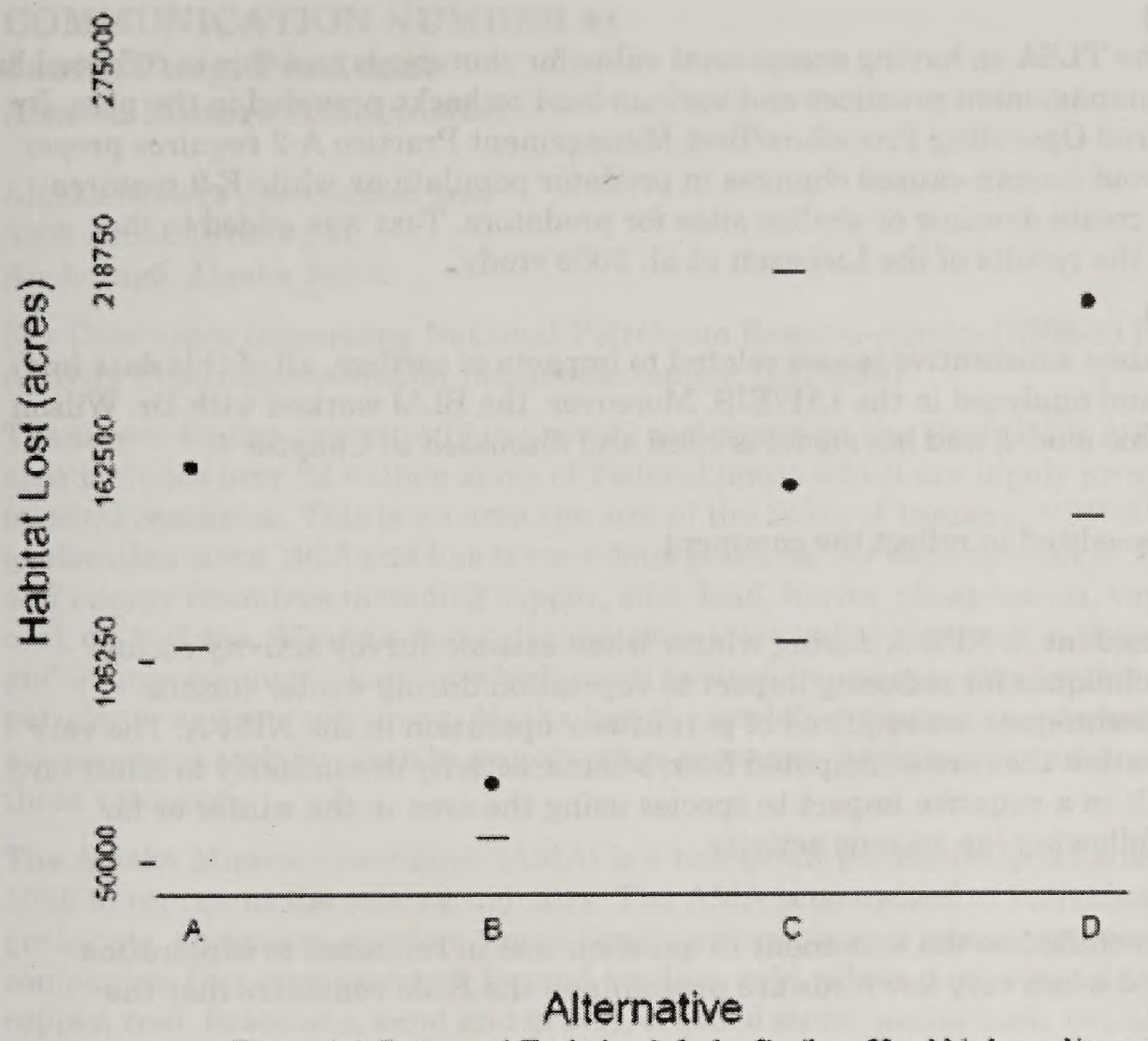

Figure 14. Estimated Teshekpuk Lake Caribou Herd high-quality calving habitat lost in the NPR-A based on oil development scenarios for each BLM alternative (Wilson et al., unpublished data).

Fig. 14

[Response to 30.001]
The BLM recognizes the TLSA as having exceptional value for shorebirds and this is reflected in the stipulations, best management practices and various land setbacks provided in the plan. In all alternatives, Required Operating Procedure/Best Management Practice A-2 requires proper disposal of refuse to avoid human-caused changes in predator populations while E-9 requires that structures do not create denning or shelter sites for predators. Text was added to the document to highlight the results of the Liebezeit et al. 2009 study.

[Response to 30.002]
While this comment raises substantive issues related to impacts to caribou, all of this data has been fully considered and analyzed in the IAP/EIS. Moreover, the BLM worked with Dr. Wilson in the development of his model, and his model is cited and discussed in Chapter 4.

[Response to 30.003]
Section 4.3.8.4 has been edited to reflect the comment.

[Response to 30.004]
Few bird species are resident in NPR-A during winter when seismic survey activity occurs. Moreover, there are techniques for reducing impact to vegetation during winter tundra movements and those techniques are required of permittees' operation in the NPR-A. The very minor impacts to vegetation that are anticipated from seismic activity are unlikely to affect bird habitat enough to result in a negative impact to species using the area in the winter or for breeding the summer following the seismic activity.

[Response to 30.005]
The text has not been modified as the statement in question was in reference to exploration during the winter period when very few birds are present and the BLM considers that the statement is correct.

[Response to 30.006]
No change to the text was made. In the text as written "sensitive area" refers to the vegetation and its sensitivity to crushing and the length of time that it takes different types of vegetation to recover (return to previous state) it does not refer to bird habitat. The cited study does show that there are techniques for reducing impact to vegetation during winter tundra movements and those techniques are required of permittees operation in the NPR-A. As a result of those techniques the BLM considers that it is valid to say that reducing the effect on vegetation in general would have a positive effect on bird habitat.

[Response to 30.007]
Please see Chapter 4 Fish, Oil and Gas Exploration and Development Activities, Effects of Water Demand for a discussion of lake recharge from winter exploration activities. Scientific studies are cited in that section that result in the conclusion that "In the existing areas of oil exploration and development on the Arctic coastal plain, lakes pumped solely for winter exploration activities have recharged in the spring".

[Response to 30.008]
The impact analysis is thorough and appropriate. Quantification has been used as appropriate. Synergistic and additive effects have been addressed.

[Response to 30.009]
The impact analysis is thorough and appropriate given the uncertainty regarding the scope and location associated with potential future activities.

[Response to 30.010]
The impact analysis is thorough and appropriate given the uncertainty regarding the scope and location associated with potential future activities.

COMMUNICATION NUMBER 41
James Fueg, President
Alaska Miners Association

Alaska Miners Association, Inc.
3305 Arctic Blvd. #105
Anchorage, Alaska 99503

RE: Comments concerning National Petroleum Reserve-Alaska (NPR-A) Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS)

Thank you for the opportunity to provide comments on the Draft NPR-A IAP/EIS. This planning area includes over 22 million acres of Federal lands which are highly prospective for energy and mineral resources. This is an area the size of the State of Indiana. NPR-A has been closed to exploration since 1923 and has tremendous potential for development of a variety of mineral and energy resources including copper, zinc, lead, barite, phosphorous, vanadium, gold, silver, coal, oil and gas. Alaska's mining industry is extremely interested in these potential mineral and energy resources some of which could be used to assist in the development of Alaska's petroleum and gas resources. Alaska has the world's strongest environmental safeguards and management tools in place to protect other resources during exploration and development of these resources.

The Alaska Miners Association (AMA) is a non-profit membership organization established in 1939 to represent the mining industry. The AMA is composed of individual prospectors, geologists, engineers, vendors, small family miners, junior mining companies, and major mining companies. Our members look for and produce gold, silver, platinum, diamonds, lead, zinc, copper, coal, limestone, sand and gravel, crushed stone, armor rock, etc. Our members live and work throughout the state and have substantial interest in the exploration for and development of mineral and energy resources in the NPR-A.

[Preamble 41.001] The AMA is opposed to BLM's findings that it is inappropriate to consider hardrock and/or coal resources as part of the proposed DEIS (see Chapter 1, Introduction, Pg. 4).

"The BLM considered the following issues, but has determined that they are inappropriate for analysis within this IAP/EIS....Hardrock and Coal Mining and Lifting of Other Withdrawals: The NPRPA withdrew the NPR-A from the operation of the mining laws and other land laws (e.g., Homestead Act, Alaska Statehood Act), extending withdrawals that President Warren Harding put in the place when he established the Naval Petroleum Reserve #4, the NPR-A's predecessor, in 1923. Substantial numbers of commenters during scoping supported or opposed recommending legislation to open the NPR-A to mining. Such a recommendation or the broader recommendation to lift all withdrawals in the NPR-A advocated by a smaller number of commenters, however, would be contrary with the NPRPA of 1976 and would not be consistent with either of the two major purposes of the NPRPA's establishment of the NPR-A or with the purpose of this plan (i.e., it would neither further oil and gas leasing nor protect surface values consistent with oil and gas activities)."

[41.001] At the time that the National Petroleum Reserve #4 (PET-4) was established in 1923 the area's geology was poorly understood. The least explored portions of PET-4 included the southern part of what is now referred to as NPR-A. In 1923 PET-4 was believed to be of primary value for its oil and gas resources. More recent (mostly after 1970) mineral resource exploration by the USGS, Bureau of Mines, and industry, indicates that the southern portion of NPR-A has substantial value for metals and industrial minerals. Some of these materials could be used to support the development and production of oil and gas resources in the more northerly portions of the NPR-A.

The AMA also suggests that the nearly 80 year old decision to withdraw PET-4 (now NPR-A) from operation of the mining laws was based on limited data and that that decision should be

revisited based upon current world events and our improved knowledge about the resources in the area. Our nation cannot afford to eliminate potential stable supplies of critical mineral resources based upon historic decisions made without the benefit of more recent information.

The Bureau of Land Management (BLM) is a multiple use agency with the responsibility to encourage jobs related to the development of natural resources. BLM must recognize the important role that mineral development can play in improving the economic well-being of the residents in and near the planning area as well as the economic well-being and security of the Nation as a whole.

Most Federal lands in Alaska are currently closed to mineral and energy resource exploration and development. Other Federal lands that are open but significantly constrain mineral and energy resource development. The nation can no longer afford to prevent development of the vast majority of its domestic mineral and energy resources located on Federal lands. The United States is rapidly being replaced as an economic world leader largely due to our refusal to develop our own natural resources. Over dependence on foreign sources of supply has historically been proven to be an important factor in the decline and fall of nations from world positions of leadership and power (see The Rise and Fall of the Great Powers, by Paul Kennedy, 1987).

We have the ability to do it right yet we are forcing our workforce, our manufacturers, and our suppliers to look for opportunities overseas. In other countries, where projects are being developed, it is often without the same level of environmental safeguards found in the U.S.

The AMA supports a modified version of Alternative D that would maximize the amount of land open for oil and gas leasing and exploration and would additionally allow for further exploration of hardrock minerals and coal in the southern and central portions of NPR-A when the area is opened for this purpose.

Thank you for considering our comments. We request that BLM reconsider their decision not to consider the potential for developing hardrock mineral and coal resources in NPR-A as a part of the IA-DEIS.

Sincerely,
James Fueg
President, Alaska Miners Association

[Response to 41.001]
The BLM has determined that it would not recommend legislation to allow hardrock and coal mining as part of this plan. For a discussion of that determination, see section 2.4.3.

COMMUNICATION NUMBER 42
Richard Ranger, Senior Policy Advisor, API
Kate Williams, Regulatory and Legal Affairs Manager, AOGA

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May 29, 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage AK 99508-3438

Re: Comments, Draft IAP/EIS for the National Petroleum Reserve-Alaska

Dear Reviewers:

The American Petroleum Institute (API) and the Alaska Oil and Gas Association (AOGA) offer the following comments on the Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve – Alaska (NPR-A). The IAP/EIS was published in the Federal Register March 30, 2012. API is a national trade association that represents over 470 members involved in all aspects of the oil and natural gas industry, including exploring for and developing oil and natural gas resources in Alaska. AOGA is a business trade association whose 16 member companies account for the majority of oil and gas exploration, development, production, transportation, refining, and marketing activities in the State of Alaska.

Either directly or indirectly, API and AOGA member companies have been working to develop our nation's energy resources in an environmentally responsible manner, and are greatly interested in exploring for and developing oil and natural gas resources found in the U.S. Arctic. We believe that the long record of our industry's operations on the Alaska North Slope, on other lands administered by the U.S. Department of Interior – and on other lands of significance to wildlife – supports the assertion that environmentally responsible development of oil and natural gas resources and appropriate management and [emphasis added] protection of habitat, wildlife and other resource values can take place on the coastal plain of the NPR-A. We believe that given the potential size of the energy resources at stake that the option of future energy development in the NPR-A coastal plain should remain on the table. We urge the Bureau of Land Management (BLM) to open all of NPR-A's subsurface to oil and gas leasing, with balanced surface protections which do not preclude development and transportation of energy resources.

We base this position on the following premises:

- Global demand for energy will grow and, because existing and developing energy sources will struggle to keep up with demand, oil and gas resources will be needed for American consumers and the American economy for decades to come.
- The NPR-A was established by law as a petroleum reserve, a management status reasserted in the Naval Petroleum Reserves Production Act of 1976. The NPR-A is not a wildlife refuge, a national park, a monument, or a wilderness area. Its primary statutory purpose is to provide for the expeditious development of oil and natural gas resources for our Nation.
- Alaska's North Slope, both on and offshore, remains a world-class hydrocarbon basin with extraordinary potential. According to the US Geological Survey, America's Arctic ranks as number one for undiscovered oil potential and number three for gas potential for the world's conventional petroleum resources north of the Arctic Circle. Nearly 50 billion barrels of conventional undiscovered, technically recoverable oil resources and 223 trillion feet of conventional undiscovered, technically recoverable gas resources may be found in the North Slope and the Arctic OCS off Alaska's northern coast. This represents 43 percent of the nation's total oil potential and 25 percent of its gas potential.
- In October 2010, the U.S. Geologic Survey (USGS) published a report titled "Petroleum Resource Assessment of the National Petroleum Reserve in Alaska," which found an estimated 896 million barrels of conventional, technically recoverable oil and 53 trillion cubic feet of conventional, undiscovered gas within NPR-A and adjacent state waters. In 2011, the USGS released its assessment of the economic recoverability of undiscovered, conventional oil and gas resources within the NPR-A and adjacent state waters. The USGS revised analysis estimates that approximately 350 to 500 million barrels of undiscovered oil are economically recoverable at $90 per barrel.
- The two largest oil fields discovered in North America are found at Prudhoe Bay and Kuparuk. The source rocks for Prudhoe Bay and Kuparuk are well-known by geologists and extensive. While their potential is unknown, the Alaska Department of Natural Resources has reported that their key indicators (thermal maturity, organic chemistry, petrophysics, and geomechanics) appear to be analogous to the Eagle Ford play in southern Texas. Three different source rocks are present, representing distinct opportunities for development if a commercial means can be found to produce them. Key to that commercial determination is the cost of production and transportation. These source rocks extend from the base of the Brooks Range near the Canning River westward in a wide swath through the NPR-A all the way to the Chukchi coast.
- Notwithstanding declines in production from the historic fields east of NPR-A nearer to Prudhoe Bay, Alaska remains one of the nation's most critical and prolific oil-producing states. For more than 30 years Alaska has supplied domestic energy supplies to markets in the United States, supplies that are particularly important to the states along the U.S. Pacific Coast. When unscheduled disruptions to this supply occur, such as in August 2006 and earlier this year in January, refineries on the West Coast are forced to seek supplies from foreign sources. While production is less than 2/3 of its peak production, Alaska still supplies approximately 600,000 barrels of oil every day.
- Spurred by global concern over the 1973 oil crisis and the OPEC embargo, the U.S. Congress acted to support rapid development of crude oil resources on the Alaska North Slope and of the Trans Alaska Pipeline System (TAPS). Congress approved construction of the pipeline with the Trans Alaska Pipeline Authorization Act of 1973. The purpose of this Act remains as relevant today as it was in 1973: "the early development and delivery of oil and gas from Alaska's North Slope to domestic markets is in the national interest because of growing domestic shortages and increasing dependence upon insecure foreign sources."

- Underscoring the urgency of the country's precarious energy security position, the Trans Alaska Pipeline Authorization Act also halted all legal challenges to delay construction of the pipeline and ensured that additional government studies would not be used to delay construction. Under its Congressional declaration of purpose the Act states: "The purpose of this chapter is to insure that, because of the extensive governmental studies already made of this project and the national interest in early delivery of North Slope oil to domestic markets, the trans-Alaska oil pipeline be constructed promptly without further administrative or judicial delay or impediment. To accomplish this purpose it is the intent of the Congress to exercise its constitutional powers to the fullest extent in the authorizations and directions herein made and in limiting judicial review of the actions taken pursuant thereto."
- The importance of domestic energy supplies and the capability of Alaska's resource base to provide those supplies inspired Congressional action in 1973 and remain equally relevant today. A recent study, "Potential National-Level Benefits of Alaska OCS Development" conducted by Northern Economics and the Institute for Social and Economic Research at the University of Alaska Anchorage examined the national benefits associated with commercialization of oil and gas resources in the Arctic OCS. Their findings demonstrate that there are significant, material gains available to the nation through development of domestic natural resources. The development of these resources means jobs, domestic energy supplies, and revenues for the federal treasury.
- Focused on the resource potential of the Alaskan Arctic Outer Continental Shelf in the Chukchi and Beaufort Seas, this study found: "Commercialization of oil and gas resources in the Beaufort OCS and the Chukchi OCS, could generate $97 billion and $96 billion (in 2010$), respectively, in revenues to federal, state, and local governments, over a 50-year period. Economic activity resulting from OCS development in the Beaufort Sea and Chukchi Sea could generate an annual average of 54,700 jobs nationwide, with an estimated cumulative payroll amounting to $145 billion (in 2010$) over the next 50 years. It is estimated that about 30,100 jobs would be generated from the Beaufort OCS development and 24,600 jobs from development of the Chukchi Sea OCS." The importance of continuing to manage NPR-A in conformity with its statutory purpose not only pertains to the potential significance of NPR-A's subsurface resources, but in the ability to provide rights of way across NPR-A for pipeline infrastructure to support development of OCS resources in the Beaufort and Chukchi Seas. The management of the NPR-A, which encompasses much of the North Slope, is therefore of great importance, and would effect and potentially prevent the transportation of oil and gas resources from the Beaufort and Chukchi Seas to market.
- Development of oil and natural gas resources in the Alaskan Arctic can occur in an environmentally responsible way. In over 30 years of oil production at Prudhoe Bay and other fields on the Alaska North Slope, producers have significantly advanced technology in drilling, Arctic engineering, waste disposal and environmental management, and have developed better tools to locate the underground structures that contain oil. Together, these advancements and the commitment to environmental performance by the men and women who work on the Slope have greatly reduced the effects of oil development on the wildlife and surface resources surrounding the production operations, and have reduced the footprint that these operations occupy.
- Americans do not have to choose between development of valuable energy resources or the protection of Arctic species and the habitat on which these species live, feed, breed, rear their young, and migrate.

The Draft IAP/EIS is the first plan that covers the entire NPR-A. It includes BLM-managed lands in the southwest area of the NPR-A which were not included in previous plans, and proposes several alternative future management strategies for the NPR-A. Decisions to be made as part of this plan include oil and gas leasing availability, surface protections, Wild and Scenic River recommendations, and Special Area designations. This document will provide the basis for any infrastructure necessary for development of the considerable resource potential believed to

occur beneath the Beaufort and Chukchi Seas. Since determination of the specific nature of that infrastructure is in its very preliminary phases, it is very important that the least limiting of the alternatives presented be adopted for management of NPR-A.

Because of this, the omissions in the Draft IAP/EIS are cause for concern.**[42.001]** Although the "Purpose and Need" section of the Draft IAP/EIS states that one of its purposes is to ensure that BLM's land management practices in the NPR-A will provide the opportunity to construct the necessary pipelines and appurtenances to bring Chukchi Sea oil and gas resources to TAPS, it provides no description or analysis of how this would be accomplished. Additionally, each of the proposed Alternatives have significant restrictions in the form of designated Special Areas, Wild and Scenic Rivers, stipulations, required operating procedures (ROPs), and best management practices (BMPs), that could greatly impact holders of valid oil and gas leases issued by the U.S. government in the Beaufort and Chukchi Seas by affecting their ability to secure permits for and to construct a pipeline across NPR-A to TAPS. Further ore, Although the "Purpose and Need" section of the IAP/EIS states that one of its purposes is to ensure that BLM's land management practices in the NPR-A will provide the opportunity to construct the necessary pipelines and appurtenances to bring Chukchi Sea oil and gas resources to TAPS, it provides no description or analysis of such an event. Additionally, each of the proposed Alternatives have significant restrictions in the form of Special Areas, Wild and Scenic Rivers, stipulations, required operating procedures (ROPs), and best management practices (BMPs), that could greatly impact Chukchi Sea leaseholder's ability to permit and construct a pipeline across NPR-A to TAPS.

The Purpose and Need statement for this IAP/EIS states that "to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process to construct necessary onshore infrastructure, primarily pipelines and roads, to bring oil and gas resources from leases in the Chukchi Sea to the TAPS or a future gas pipeline from the North Slope." All 4 alternatives do contain language indicating that a pipeline from the Chukchi Sea to TAPS could be permitted under the identified land management practices. However, all the Alternatives also prohibit such infrastructure over large areas (lands where new non-subsistence infrastructure is prohibited).

All four Alternatives include the maintenance and management of large Special Areas, which have associated stipulations, ROPs, and BMPs, that could prevent the construction of a pipeline. The acreage of Special Areas within the NPR-A is significantly increased in Alternatives B and C through the expansion of existing Special Areas (e.g., Teshekpuk Lake Special Area) and/or creation of new Special Areas (e.g., Peard Bay Special Area). Some of the existing Special Areas should be reduced or eliminated. For example, the Colville River Special Area was created to protect the Arctic Peregrine Falcon which was listed as a threatened and Endangered Species at the time. Since then, the Arctic Peregrine Falcon has been removed from the list of threatened and endangered species. Despite the de- listing, under all four Alternatives, the Colville River Special Area is maintained at its current size, and actually provided with expanded conservation measures to now cover all raptor species, none of which are threatened or endangered. The Alternatives would result in up to 67 percent of the entire NPR-A being in Special Area status, which may prohibit pipeline construction. This is unacceptable for an area dedicated for the development of oil and gas resources. **[42.002]** The BLM should not consider expansion of current or creation of new Special Areas and should dissolve Colville River Special Area as its initial purpose is no longer relevant.

[42.003] While outlining proposed ROPs and BMPs, the BLM frequently leaves additional operational restrictions and mitigation measures to be applied to projects to the discretion of an authorized officer who may determine these measures as they interpret to meet 'objectives of stipulations.' One of the largest challenges around the timely approval for requested authorizations and permits from federal agencies includes the unknown and inconsistent interpretation of regulations. This disclaimer statement in the ROPs and BMPs gives an individual within the BLM ability to impact timelines and costs for proposed projects and

creates significant project uncertainties for parties proposing projects for possible development of subsurface resources in the NPR-A, or for infrastructure across NPR-A to support development of Beaufort or Chukchi Sea resources. Additional mitigations, BMPs, and determinations should not be left to the discretion of Agency individuals.

[42.004] It is reasonable to conclude that the adoption of any of the Alternatives that would establish extensive Special Areas within NPR-A will amount to a de facto administrative designation of new wilderness areas. In this context it is important to note that the Alaska National Interest Lands Conservation Act of 1980, (16 USC 410hh-3233, 43 USC 1602-1784, Public Law 96-487, 94 Stat. 2371 (ANILCA) directly addresses the establishment of additional conservation system units (including new wilderness areas) in Alaska. The statute restricts executive authority to consider these except as authorized by ANILCA itself or further acts of Congress. See, e.g., Sections 101(d) and 1326. Section 1326(b) of ANILCA is designed to foreclose exactly the actions which the IAP/EIS describes: the designation of Special Areas managed for their wilderness values that could amount to the establishment of new conservation system units in Alaska. In addition, the time for any proposal for more wilderness areas in national parks or wildlife refuges under ANILCA was specifically limited under Section 1317 to five years after the statute's enactment. That time period has long since concluded. No provision of ANILCA, or any other controlling law, authorizes such an agency proposal decades later, and such a proposal is precluded by Sections 102(d), 1317 and 1326(b) of the statute.

[42.005] Furthermore, Alternatives 3 and 4 in the IAP/EIS include the recommendation of 12 rivers as Wild Rivers and 3 three rivers as Scenic Rivers respectively. These rivers largely flow from the south to the north. Therefore, any restrictions on pipeline construction could make it difficult or prohibitive to transporting oil and gas to TAPS or elsewhere. In Section 1.4.c where the idea of creating Wild and Scenic Rivers is introduced, the IAP/EIS does not include language that requires the decisions regarding the designation or recommendation of rivers to be wild and scenic to be made in accordance with the Act, and therefore such designations or recommendations should not be included as part of any Alternative. Such designations likewise effect the administrative establishment of new areas managed for wilderness characteristics, and are not in accordance with the purpose of the NPR-A.

[42.006] API and AOGA also observe that the ANILCA 810 Analysis (Appendix A of the IAP/EIS) provides a disproportionately greater review of Alternative D compared to the other three Alternatives, and provides unsupported conclusions. Alternative D is the Alternative that would allow BLM to offer all of the NPR- A for oil and gas leasing, while protecting surface values by means of various management approaches. This has the effect of skewing the reviewer's perception that Alternative D would have significant impacts to subsistence activities if this Alternative were to be selected. API and AOGA recommend that additional review and resources be referenced for this analysis and believes that equal analysis should be provided in a fair and balanced manner for all Alternatives regarding potential impacts to subsistence activities and resources.

API and AOGA believe that the management objective to sustain naturally occurring fish and wildlife species in the NPR-A, including their interactions, population cycles and ecological roles, can be achieved without designation of extensive new Special Areas and the effective withdrawal of vast portions of NPR-A from multiple use, mineral entry, and availability for right-of-way. Likewise, management of the NPR-A to facilitate continued subsistence uses by Alaska Native populations living near the NPR-A or having access to it does not depend upon the establishment of extensive new administratively designated wilderness areas. International treaty obligations related to the conservation or migratory birds, marine mammals, caribou and fish, and stewardship of surface water resources and water quality can continue to be carried out without placing large portions of NPR-A off limits to resource development or multiple use

In the existing producing areas of the Alaska North Slope to the east of the NPR-A, the industry is demonstrating approaches to production of vital national energy resources, protection of the

environment and wildlife, and coordination with residents of the North Slope Borough that are applicable to future BLM management of the NPR-A.

At Prudhoe Bay, Alpine, Kuparuk and associated fields, drilling advances and improved waste management techniques have resulted in a marked reduction in the land area needed for oilfield development. Wells that were once spaced about 120 feet apart are drilled as closely as 10 feet. With grind and inject technology, drilling wastes are safely reinjected underground into isolated geologic formations, eliminating the need for surface storage areas or reserve pits that were customary during the early years of the development of the Prudhoe Bay field. Prudhoe Bay development directly covers about 5,000 acres, or less than 2 percent of the field's total surface acreage, nearly all of which remains for use by the abundant mammal and bird life with which industry shares the area. In fact, over the period of development of the existing North Slope fields, the population of the Central Arctic caribou herd has increased by a factor of six, and populations of more than 200 different species of waterfowl migrate to the lands surrounding the North Slope oil fields each spring. As an example of evolving technology, the 40,000 acre Alpine field to the west of Prudhoe Bay, in the ecologically rich Colville River delta, has been developed from facilities covering about 100 acres, or less than .2 of 1 percent of the land. This is analogous to producing subsurface oil and gas resources covering an area roughly the size of the District of Columbia from a footprint slightly larger than the U.S. Capitol grounds. Today exploration drilling is conducted from temporary pads of ice that disappear after the well has been drilled, leaving virtually no trace. Construction of pipelines and other facilities is also done during the winter from ice roads or pads.

Together these experiences show that it is unwise to use the IAP/EIS process and subsequent decisions that might derive from this process to administratively designate large portions of NPR-A as wilderness. It would be unwise to preclude a future opportunity to achieve this balance where the combination of resource concerns – as acknowledged in ANILCA – is of unique significance, and where the example of lands administered by the State of Alaska shows that stewardship of the ecological resources of the North Slope can be achieved through government and private collaboration.

The significance of future development of the oil and natural gas resource endowment in the Arctic NWR coastal plain must also be considered in the context of continued operation of the Trans-Alaska Pipeline System ("TAPS"). TAPS has been identified as critical infrastructure for national security because of the transportation link that it provides to present and future development of crude oil resources in Alaska's Arctic regions. Since commencement of its operation in August of 1977, TAPS has proven to be a strategically critical component of America's energy infrastructure. Designed as a 48 inch pipeline, TAPS has transported over 16 billion barrels of American oil from the Alaska North Slope to the Valdez Marine Terminal, from which tankers carry the oil to U.S. West coast terminals and refineries. At its peak in the late 1980s, TAPS was transporting about 2.1 million barrels of crude oil per day, or about 25 percent of our nation's domestic crude oil supply. Since 1989, there has been a steady decline in Alaska North Slope production, and current average TAPS throughput is about 600,000 barrels per day compared to 2 million barrels per day in 1988, or about one-third of its capacity and now approximately 11 percent of our nation's oil production. Over the same period, while production from existing fields has diminished, efforts to find and develop potentially promising new crude oil resources in Alaska and in Alaska's Arctic Outer Continental Shelf have been stymied by regulatory delays and litigation.

While its maintenance and operational record has been exemplary, if production from existing Alaska North Slope fields that now moves through TAPS continues to decline, and administrative and litigation- driven barriers prevent the discovery and development of new crude oil resources in Alaska's Arctic, the continued operation of one of America's energy supply lifelines could be prematurely placed at risk decades before the end of its useful design life. Access to the crude oil resource potential in and offshore Alaska is thus important not only for the additional supplies of domestically produced energy that discovery and development of those

resources would bring. The viability of TAPS depends upon increasing safe and environmentally responsible production in and offshore Alaska.

To summarize, the resource potential available in the NPR-A is considerable and its location astride the likely routes for infrastructure to support development of Beaufort and Chukchi Sea resources is of potentially leveraging significance for projects in those areas. Industry's ability to operate safely and in an environmentally responsible manner in ecologically sensitive Arctic environments has been demonstrated for five decades. Alaskan oil and gas operations have been a proving ground for technologies that have steadily reduced both the footprint and the impacts of exploration and production activities the industry undertakes. ANILCA, the sweeping statute that established numerous new units of the National Park and National Wildlife Refuge systems, prohibits the administrative designation of new wilderness areas without specific Congressional action. API and AOGA encourage an outcome of the IAP/EIS process for the NPR-A that does not preclude the possibility of producing needed energy resources from an area historically designated for their environmentally responsible development.

The NPR-A is a petroleum reserve. Consistent with the original intent for its establishment, BLM should manage the area in a manner that accommodates exploration and production of oil and gas resources in the Reserve and the construction of infrastructure necessary to support development of resources in the Chukchi and Beaufort Seas. Expanding special areas and wild and scenic rivers devalues the purpose and intent of the reserve as set out in the Naval Petroleum Reserves Production Act of 1976. Both the State of Alaska and the U.S. government have set aside large portions of the state for conservation purposes. Administrative designation of large portions of the NPR-A as de facto wilderness not only run counter to the ANILCA and the Naval Petroleum Reserves Production Act of 1976, but could further cause significant economic harm to Alaskans who depend on revenue from resource development to fund critical public services. Approval of the IAP/EIS in a form that provides for the opportunity to obtain oil and gas leases across the Reserve and for construction and operation of infrastructure for the Chukchi and Beaufort Seas will help ensure American energy consumers have access to these abundant Alaskan resources, will generate revenues for state and federal treasuries, and will provide jobs and economic stimulus for Alaskans and for other Americans.

Thank you for considering these comments. If you need additional information, please contact Richard Ranger of API at 202.682.8057 or Kate Williams of AOGA at 907.272.1481.

Very truly yours,

Richard L. Ranger
API Senior Policy Advisor, Upstream

Kate Williams
AOGA Regulatory and Legal Affairs Manager

Attachment to Letter dated May 29, 2012 from API and AOGA
Comments, Draft IAP/EIS for the National Petroleum Reserve-Alaska

1. Teshekpuk Lake area "No Leasing" restrictions in B and C are far too expansive. The last EIS in NE and NW planning area were developed not too long ago based on sound scientific analysis and extensive public review and comment and the restricted area was much smaller.

a. ALTERNATIVE A - Subsection 4.3.8.3 -Page 177 – Paragraph 1- Second to last line – "As there has been no oil and gas yet in the NPR-A, it is difficult to determine the effectiveness of the above mentioned operating procedures and stipulations." Also Subsection 4.3.11.2 - Page 241, Paragraph 3 - Given that there has been no production (although oil and gas resources DO exist in NPRA), why is there a proposal for the Peard special area, enlarged special areas, especially Teshekpuk, and the proposed creation of scenic rivers and lakes in Alternatives B & C. [emphasis added]

b. Subsection 4.3.18 - Page 312 – Wilderness Characteristics Alternative A – We support that "Alternative A does not recommend any rivers for valid and scenic river status."

c. ALTERNATIVE B - Section 4.4

d. Subsection 4.4.14.3 – Page 439 – Enlarging three special areas and creating a new one is premature "As there has been no oil and gas yet in the NPR-A, it is difficult to determine the effectiveness of the above mentioned operating procedures and stipulations." (See Subsection 4.3.8.3, Page 177 above)

2. Exploration activity in Greater Mooses Tooth and Bear Tooth Units establish that oil hydrocarbons exist in the NE planning area and future developments/expansions and new exploration would be greatly
hampered by expanded Teshekpuk Lake area restrictions.

a. Volume 2: Chapter 4, Subsection 4.2.1. 2, Page 54 – Paragraph 2 - Alternative B provisions regarding no leasing/infrastructure "do not apply to the valid existing leases within the existing units." Industry will reasonably rely on this assertion, but there is concern with the creep regarding the Teshekpuk Lake Special Area restrictions.[emphasis added]

3. It is essential to keep "economic" options open for potential Chukchi oil pipeline routes across the NPR-A.

a. The IAP/EIS states in various places that a Chukchi pipeline corridor "could" be accommodated under the alternatives, but no detail is provided to describe how this would be accomplished. In addition, the suggestion that accommodation of a Chukchi pipeline corridor is further made subject to the outcome of a future NEPA process and the possible establishment of new special areas. This discussion falls far short of assurance that a pipeline corridor to support development of discoveries made in the Chukchi Sea or Beaufort Sea planning areas is to be accommodated in future NPR-A planning. See e.g.

b. Volume 1: Chapter 2, Page 20, 1st Paragraph

c. Volume 2: Chapter 4, Page 267, 3rd Paragraph; Page 268, Second paragraph; Page 280, 1st Paragraph, Page 393, 1st Paragraph; page 413, last paragraph, etc.

4. Subsection 4.4.17 – Page 447 - The creation of 12 "Wild and Scenic Rivers" is not needed since adequate mitigation measures to protect and "retain the existing character" of the rivers are already in existence.

[Response to 42.001]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope.

However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. It properly describes the development that may be associated with such infrastructure in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development" and appropriate analysis of associated cumulative impacts is provided in Chapter 4, Section title "Cumulative Effects on the Environment."

[Response to 42.002]
The IAP/EIS discusses reducing or eliminating Special Areas in section 2.4.4. The Colville River Special Area continues to provide valuable raptor habitat.

[Response to 42.003]
The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques at the time of application for a permit.

[Response to 42.004]
Special Area designation does not restrict future development. The BLM has leased lands in Special Areas in the past, some current leases are in Special Areas, and all of the alternatives in the current plan would allow leasing in some Special Area lands. The BLM is not considering recommendations for wilderness areas or additions to conservation system units, other than Wild and Scenic Rivers, in this plan. For further discussion, see the discussion of Alternatives Considered but Eliminated from Detailed Analysis in Chapter 2 and the discussion of Wild and Scenic Rivers in Chapter 3.

[Response to 42.005]
The Wild and Scenic Rivers Act requires that designated rivers be managed to protect free-flow, water quality, and the outstandingly remarkable values for which the river was designated. Classification does not necessarily prohibit pipelines (MS-6400 3.6.B.1 and 7.5, BLM 2012).

The classification of a river as wild, scenic, or recreational should represent the condition of the river area at the time the river is being considered for suitability (MS-6400 3.2, BLM 2012). Because of motorized access by air and snowmachine for subsistence and recreation, and the presence of some structures and Native Allotment inholdings it was not completely clear which classification would be most appropriate, and this is reflected in the alternatives.

[Response to 42.006]
Alternative D would make 100 percent of the NPR-A available for leasing. The review of Alternative D is longer than the reviews of the other Alternatives because impacts to larger areas, to more ecologically sensitive areas, and from lower levels of surface protections had to be evaluated. The review clearly states that the overall potential for Alternative D to disturb subsistence species and result in conflicts over access to subsistence areas (particularly access) is great enough to support the conclusion that subsistence uses may be significantly affected.

COMMUNICATION NUMBER 43
Wesley J. Heinold, HSE Vice President Alaska
ConocoPhillips Alaska

June 15, 2012

Via Hand-Delivery
BLM Public Information Center
222 West 7th Avenue
Anchorage, Alaska 99513-7599

Re: ConocoPhillips Alaska, Inc.'s Comments on the Draft Integrated Activity Plan/Environmental Impact Statement for the NPR-A

Dear NPR-A Planning Team Leader:

ConocoPhillips Alaska, Inc. (CPAI) submits the following comments on the Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve-Alaska (the Petroleum Reserve, or NPR-A). The Bureau of Land Management (BLM) formally requested comments on the Draft document in the March 30, 2012 Federal Register, 77 Fed. Reg. 19318-19 (Mar. 30, 2012). The public comment period, as extended by BLM, ends on June 15, 2012.

CPAI's comments are being provided to the BLM in four parts, which consist of this letter and three attachments. In this letter, CPAI addresses from an overall perspective its primary concerns and comments, particularly CPAI's opposition to proposed actions that would presumptively eliminate or discourage areas from potential oil and gas exploration. Attachment 1 provides CPAI's detailed comments regarding aspects of the proposed "Required Operating Procedures" (ROPs). Attachment 2 provides CPAI's detailed comments on a broader range of factual issues, omissions and concerns in the Draft IAP/EIS. Attachment 3 provides Yellow Billed Loon habitat data from 1996 through 2011. CPAI appreciates BLM's review and consideration of the enclosed comments.

I. The IAP Should Encourage Oil and Gas Activities While Protecting Surface Resources

As generally described in the Draft IAP/EIS, in the Naval Petroleum Reserves Production Act of 1976 (NPRPA), Congress directed the Secretary of Interior to establish in the Petroleum Reserve "an expeditious program of competitive leasing of oil and gas," while also ensuring protection of important surface resources and uses. Within this statutory context, for the third time in eight years, BLM has undertaken a large-scale management planning process intended to establish a new plan applicable to the Petroleum Reserve. For the lands covered in the prior two efforts, this is an unprecedented action. The BLM's stated purpose in undertaking yet another planning process is as follows:

The BLM is developing the plan for the entire NPR-A to address the nation's need for production of more oil and gas through additional leasing in the NPR-A, and to protect surface values consistent with the exploration and development of oil and gas. . . . [O]n May 14, 2011, President Obama directed the Department of Interior to conduct annual oil and gas lease sales in the NPR-A. Management consistency will better protect sensitive areas while providing development opportunities during these sales. [Draft IAP/EIS at p. i.]

As has been addressed in prior federal North Slope and adjacent offshore environmental impact reviews and leasing decisions, there are vast frontier areas of federal lands in and adjacent to Alaska, which have considerable oil and gas potential. The NPR-A is one such area. Because costs and uncertainty are high in the Petroleum Reserve, the best means of promoting exploration that may lead to discovery and development of economic domestic hydrocarbon reserves is to maximize the area available for leasing (i.e., more area equals more opportunity), while still ensuring through lease stipulations and required operating procedures that surface

values are adequately protected. Responsible development with environmental protections are further assured through the multi-layered series of public environmental reviews that lease sales, and exploration and development activities must proceed through in addition to the present IAP/EIS planning process. Exclusion of large areas at the initial planning stage precludes all opportunities to look for, discover and compatibly develop oil and gas in such areas without regard to the nature, extent and location of the resource, and without regard to a project-specific proposal or mitigation.

The defining elements of an NPR-A land management plan that would be faithful to the stated objectives of the NPRPA and to the goals of BLM in engaging in this planning process are:

- Allow for oil and gas leasing across the broadest spectrum of the Petroleum Reserve, while ensuring protection of surface resources and uses through lease stipulations, ROPs and best management practices (BMPs).
- Limit creation of special management areas that prohibit or discourage leasing and exploration and development activities to areas of significantly increased sensitivities.
- Avoid overlaying the existing federal protections of the NPRPA, and all the other applicable federal, state and local permitting requirements, with new "wilderness" designations that would maximize land management conflicts, rather than harmonize land management planning, in the Petroleum Reserve with little if any benefit to the lands and resources.

The Draft IAP/EIS proposed alternative that best incorporates these elements is Alternative D.

A. Support for Alternative D

CPAI strongly encourages BLM to develop a Record of Decision (ROD) that incorporates a preferred alternative that allows for oil and gas development across the 22.8 million acres that comprise the NPR-A while protecting surface values with a collection of protective measures based on well-analyzed data from North Slope studies and experience, contained within oil and gas leasing stipulations, ROPs and BMPs. This approach would encourage exploration for and production of all economically recoverable and responsibly developable oil and gas from BLM's subsurface estate in Petroleum Reserve.

Except for Alternative D, each of the alternatives would establish very significant presumptive obstacles to oil and gas leasing, exploration. Such obstacles conflict with the stated need to encourage leasing and production from the NPR-A, and yet serve no demonstrated need. To date, leasing stipulations, ROPs and BMPs have proven fully effective in protecting sensitive surface resources and uses in the Petroleum Reserve.

B. No Additional Special Areas Within NPR-A

CPAI strongly objects to increasing the size of existing Special Areas or the addition of new Special Areas. Protective measures incorporated as stipulations, ROPs and BMPs provide adequate protection to the surface values of the Petroleum Reserve as intended in NPRPA . While CPAI recognizes the resource value of the new and additional areas identified in Alternatives B and C, creation of additional obstacles across an expanded area of the Petroleum Reserve would conflict with, not promote expanded responsible oil and gas leasing, exploration and development. As recognized in the Draft IAP/EIS, there are different and less onerous means of providing protection for these areas, including through the additional required NEPA assessment and permitting processes that would be required for any future activities, and through establishment of both a clear set of criteria and a process that, at a minimum, allows for limited access, exploration and pipeline crossings [1]. CPAI firmly believes that establishing areas as "unavailable" (see, e.g., Map 2-2, Alt B, around Teshekpuk Lake) to oil and gas exploration and development in a petroleum reserve is problematic because doing so presumptively and categorically limits options for finding and bringing future oil and gas to market [2].

The existing Colville River Special Area is a good example of the problematic nature of establishing Special Areas with the Petroleum Reserve. CPAI certainly recognizes that the Colville River is an important aquatic resource. However, the Colville River Special Area was specifically created for the protection of the Arctic Peregrine Falcon after it was listed for protection under the Endangered Species Act (ESA). As the BLM has acknowledged, the Arctic Peregrine Falcon was delisted from the ESA nearly two decades ago (in 1994). Nevertheless, all four of the proposed Draft IAP/EIS alternatives reflexively and without explanation maintain the Colville River Special Area, while providing for expanded conservation measures to address additional raptor species, none of which are threatened or endangered species. Rather than maintaining the area and expanding applicable conservation measures, BLM should consider dissolving this special area because the impetus for its creation (special status of the Peregrine Falcon species) is no longer a relevant conservation imperative.

C. No Wild River, Scenic River, or Wilderness Designations

CPAI strongly opposes additional wilderness-type designations with the Petroleum Reserve, such as the proposed Wild River and Scenic River nominations described in Alternatives B and C of the Draft IAP/EIS. Limiting the potential for exploration and development prior to knowledge of what resource is available in a particular location may preclude development altogether and conflicts with the intent of the NPRPA.

The NPRPA establishes a comprehensive federal land management program applicable to the Petroleum Reserve. Moreover, proposed oil and gas activities within the area require multiple layers of NEPA assessment and a very substantial array of federal, state and local authorizations and permits. See, e.g., Draft IAP/EIS at § 1.9. The NPRPA establishes the basis upon which the BLM is to harmonize oil and gas leasing, exploration, and development opportunities with important surface resources. In this context, the nomination of areas within the Petroleum Reserve for wilderness status or wilderness management will not increase the rigor of already required federal regulatory reviews and permitting processes. Instead, wilderness status or management can only presumptively maximize federal land management planning conflicts in the Petroleum Reserve.

CPAI fully supports BLM's decision to not conduct detailed analysis of an alternative that would recommend wilderness designations within the Petroleum Reserve, or that would consider nominations to the Wild and Scenic Rivers system in the northern part of the NPR-A because this is beyond the scope of the planning document. Similarly, CPAI opposes nomination of 12 rivers to the Wild and Scenic Rivers System as proposed in Alternatives B and C of the Draft IAP/EIS based on the lack of any rationale, purpose, or depictions of the proposed parts and buffers.

II. Management of Infectious Diseases and Drug/Alcohol Use Policies

In general, CPAI supports the concepts included in responsible and practical "Healthy Neighbor" policies (Vol. 1 Section 2.7). This support is reflected in CPAI's operational history on the North Slope. **[43.001]** However, potential Mitigation Measure 1—Infectious Disease, and potential Mitigation Measure 2 – Alcohol and Drug Use (Vol.2, Section 4.3.21.5), include some unreasonable and unmanageable objectives, with no evidence of any reasonable basis, and requirements to which CPAI strongly objects. Among other concerns, it appears that this provision would put the BLM in the unprecedented position of regulating social policy (i.e., sexually transmitted diseases, and drug and alcohol use) unrelated to matters of land management and environmental protection. CPAI does not believe that prevention of the spread of infectious diseases or of alcohol or drug trafficking, however laudable, reasonably fall within the authorized mission of the BLM under either the NPRPA or the Federal Land Policy and Management Act (FLPMA) nor has the BLM presented any basis for such authority or the need for such mitigation measures. See Attachment 2 (detailed comments regarding the Healthy Neighbor Policy concerns).

III. Employment Schedules and EEO Regulations

CPAI shares in the long-standing desire of the North Slope Borough, Native corporations and groups, and industry to increase direct employment of local residents, including the Inupiat, in oil and gas operations. However, **[43.002]** we are concerned that some of the employment mitigation measures identified in the Draft IAP/EIS exceed the mandate of the BLM's federal land management responsibilities, conflict with Equal Employment Opportunity (EEO) regulatory requirements, and present operational and safety problems. For example, mandating changes in shift schedules to allow local hunters to stay at CPAI's operational facilities for short durations and allowing subsistence leave for local workers more than likely conflict with EEO non-discrimination requirements. Furthermore, because operational safety is a very high priority, allowing local hunters access to facilities without adequate safety training is a significant safety concern and creates an unprecedented incursion on private property rights of oil and gas lessees. The current analysis in the draft IAP/EIS does not address these issues, and CPAI objects to such requirements. See Attachment 2 (detailed comments re EEO conflicts and operational/safety concerns).

As stated at the outset, additional detailed comments are included in Attachments 1 and 2 to this letter. If you have any questions or require additional information, please contact me at (907) 263-4682 or by e-mail at Wesley.J.Heinold@conocophillips.com.

Sincerely,

Wesley J. Heinold
HSE Vice President Alaska

Attachment 1: Detailed Comments on Proposed Required Operating Procedures
Attachment 2: Detailed Comments on Factual Errors, Omissions, and Concerns
Attachment 3: Yellow Billed Loon

ATTACHMENT 1: DETAILED COMMENTS ON PROPOSED REQUIRED OPERATIONS PROCEDURES

Required Operating Procedures

In general, CPAI supports the concepts of Required Operating Procedures (ROPs) and Best Management Practices (BMPs) (Vol. 1, Section 2.3.5). However, CPAI is concerned about establishing fixed procedures in circumstances where technological advancements may render some of the stipulations and operating procedures obsolete. We encourage BLM to incorporate flexibility into ROPs and BMPs by accommodating exceptions for these procedures as new technology becomes available.

CPAI has one additional concern associated with the application of ROPs and BMPs. **[43.003]** Obtaining timely permits and approvals for proposed operations is a major challenge for North Slope operators. Once obtained, certainty associated with implementation requirements is essential and, accordingly, inconsistent interpretation of regulations by agencies presents a significant risk. BLM frequently leaves application of additional operational restrictions and mitigation measures to the discretion of an authorized officer to meet "objectives of stipulations." Including this type of open-ended disclaimer statement in the ROPs and BMPs creates significant project uncertainties for parties proposing projects for possible development of resources in the NPR-A, or infrastructure across NPR-A to support development of Beaufort or Chukchi resources. Additional mitigations, BMPs, and determinations should not be left to the discretion of unknown agency employees, but should instead be fully identified with the issuance of permits so that all regulatory requirements are known to the operator in advance of committing to development operations.

Volume 1, Section 2.8, Waste Prevention, Handling, Disposals, And Public Safety, Page 38

[43.004] ROP A-3: In the last sentence of the ROP/BMP, CPAI recommends adding field before staff to make clear that only field staff, not all staff including corporate and global company

staff, would need instruction regarding procedures for hazardous materials contingency planning in the planning area.

Volume 1, Section 2.8, Waste Prevention, Handling, Disposals, And Public Safety, Page 43

[43.005] ROP A-8: Item g. Incidental take authorizations under the Marine Mammal Protection Act (MMPA) are beyond the responsibility and expertise of the BLM. Under the MMPA, it is the permittee's responsibility to determine whether an incidental harassment authorization (IHA) or Letter of Authorization (LOA) is necessary or desirable and, if so, to obtain one. Respectfully, the BLM is not authorized to determine or enforce what legal requirements of the MMPA do or do not apply, and has no legal or regulatory standing to 'encourage' an NPR-A operator to participate in the incidental take program under the MMPA.

Volume 1, Section 2.8, Water Use for Permitted Activities, Page 47

[43.006] ROP B-2: BLM should delete the reference to lake size as it is not a criterion for permitting water withdrawal.

CPAI does not support the requirement for a water monitoring plan to assess drawdown and water quality changes, before, during and after pumping from a fish-bearing lake. Most, if not all, lakes recharge naturally and without any detriment to fish species. CPAI has conducted significant work on recharge studies within the Colville River Delta and Kuparuk River Unit. These studies are public and can be made available upon request.

[43.007] ROP B-2b: CPAI appreciates that BLM modified this previous stipulation to incorporate the most updated water withdrawal criteria allowed by the State of Alaska Department of Natural Resources (ADNR) for water source lakes. However, it is unclear why the BLM included a water withdrawal ROP in this document. Water withdrawal has been the focus of considerable research since 2000, sponsored by a collaboration of scientists from industry, state, and federal agencies. Withdrawal criteria have changed in recent years as more data has become available and research is continuing in the evaluation of watershed designation and relationships to lake recharge. If the ROP remains as currently written, the requirements could become outdated and inconsistent with future practice. CPAI recommends that this ROP contain language that allows for improvements in water withdrawal criteria based on credible scientific evidence.

[43.008] ROP B-2d: As stated above, numerous lake recharge studies have been conducted on lakes within the Colville River Delta as well as in northeast part of the Petroleum Reserve (NE NPR-A). The conclusions of these studies have all been that lakes will recharge to pre-withdrawal levels. For example, a recent recharge study in the Colville River Delta confirms that mining of ice chip volumes above water withdrawal limits will not affect lake recharge and therefore will not harm fish habitat (Baker, 2007). Requiring lessees to develop monitoring plans to document recharge adds no value given the current state of knowledge and collaborative research ongoing at the University of Alaska Fairbanks, CPAI. BLM, and ADNR. CPAI recommends this ROP be removed.

Volume 1, Section 2.8, Facility Construction and Design, Page 56

[43.009] ROP E-7b: The ROP lists various options for pipeline construction in order to minimize disruption of caribou movement and subsistence use in areas where facilities or terrain might funnel caribou movement. Development designs should minimize the potential for funneling movement and restricting access, as has been stipulated by this draft AIP/EIS. The elevation of pipelines to a minimum of seven feet has been shown to allow for passage of caribou and should be included as an option in lieu of pipeline burial and ramps over pipelines. To date, analyses of pipeline burial have shown that it has not been an economic nor environmentally preferable option due to the high temperatures of most production liquids and potential for significant subsidence and alteration of habitat; thus all potential options should be presented.

[43.010] ROP E-7c: The ROP states: A minimum distance of 500 feet between pipelines and roads shall be maintained. The 1994 report by LGL Alaska Research Assoc., Inc. for the Alaska Caribou Steering Committee reviewed previous caribou research and provided a recommended range of separation distance between a road and pipeline to facilitate caribou passage. The report identified 350 feet as the minimum distance, with 1,000 feet as the maximum separation distance (Cronin et al, 1994). To be consistent with these documented recommendations and history of implementation, CPAI requests that the minimum distance be changed to 350 feet. Alternatively, the record and analysis in this IAP/EIS should provide the data demonstrating a need for increasing the minimum distance to 500 feet.

Volume 1, Section 2.8 Facility Design and Construction, Page 57

[43.011] ROP E-9: The ROP requires lessees to submit an annual report for raptor, raven, and fox nesting, denning and sheltering at oil and gas facilities. CPAI fails to see the benefit in such a report. With improvements in food waste management, combined with smaller footprints such as the Alpine development, the number of predators is significantly reduced compared to historical operations in larger fields such as the Kuparuk or Prudhoe Bay fields. To reduce unnecessary burden on industry and agency personnel for an anticipated low number of predators, CPAI recommends that nest sighting reports be submitted to BLM and other applicable agencies on a real time basis at the time the operator observes such use rather than creating administrative burden associated with annual reporting.

[43.012] ROP E-11: Special Conditions in Yellow-Billed Loon Habitats

Reference is made in both subsections a and b, under special conditions in Yellow Billed Loon ("YBLO") habitats, to a one-mile buffer around all recorded nest sites and a minimum 500-meter buffer around the remainder of the lake shoreline. There is no reference to a scientific rationale for the buffer distances but the record and analysis need to provide the basis for the distances. CPAI does not understand why the record analysis for this draft IPA/EIS do not include the dataset on YBLO nest locations collected by Alaska Biological Research, Inc. ("ABR") for CPAI in the Colville River Delta. CPAI has attached drawings that show locations of YBLO sightings, nests and broods within and outside of 1 mile of existing infrastructure (pipelines, roads, pads) as well as YBLO sightings on lakes used for water withdrawal. The CPAI drawings start with the year 1996 and carry through 2007. See Attachment 3 to this letter. As indicated in the plots, there are nests in water bodies less than one half mile from infrastructure year after year. A lake adjacent to the CD-4 pad, for example, has had a loon nest in that location before, during and after construction. That nest is approximately 345 meters (1160 feet) from the CD4 road and approximately 520 meters (1700 feet) from the CD4 pad. CPAI encourages BLM to consider available scientific data to assess the real or perceived impacts on these birds when developing buffer distances. CPAI strongly agrees that some protections are necessary; however, the protections need to be grounded in science and not on conjecture.

[43.013] ROP E-11b.(Page 59): Surveys conducted post-development of the Alpine Satellites within the Colville River Delta (CD3 & CD4), including the main production pad (CD1), indicate that YBLO will return to the same lake to nest less than half-mile from construction activity, indicating that selected habitat is more important. CPAI does not believe, and has provided supporting data, that a one-mile setback from YBLO nests is unwarranted. The data CPAI provided is not cited in this draft IAP/EIS but CPAI believes there is no basis on which the BLM may exclude consideration of such data. CPAI strongly believes that some protections are necessary; however, they should be grounded in science.

ROP E-11b.(Page 60) [3]: Surveys conducted post-development of the Alpine Satellites within the Colville River Delta (CD3 & CD4), including the main production pad (CD1) indicate that YBLO will return to the same lake to nest less than ½ mile from construction activity, indicating that selected habitat is more important. As discussed in the comment above, CPAI does not believe, and has provided data to support, that a 1-mile setback from YBLO nests is warranted.

Volume 1, Section 2.8. Facility Design and Construction, Page 62

[43.014] ROP E-17: CPAI requests that BLM explain the basis for this ROP. CPAI has constructed facilities within the northern Colville River Delta with average density of approximately 0.58 spectacled eiders/km2 and in the 12 years since commencement of such construction and operation, has not observed adverse impacts as a result of these activities. The BLM should cite the data and analysis to support proposing this ROP. BLM staff have received copies of CPAI's annual reports that present information on locations of spectacled eider nests, some within 200 m of the facilities at CD3, which do not support this proposed ROP

Volume 1, Section 2.8 Facility Design and Construction, Page 63

[43.015] ROP E-18: The period of recommended 'no disturbance' from June 1 through August 15 is not consistent with the US Fish and Wildlife Service (USFWS) Recommended Prudent Actions published in its September 2004 Biological Opinion for the Alpine Satellites Development Project (USFWS, 2004) where the USFWS indicated it would not restrict activity during the first two weeks in June, when spectacled eiders will be initiating nests. This strategy would provide the eiders an opportunity to avoid an area with activities, in essence minimizing potential disturbance during nesting. It is recommended that the period of disturbance minimization be changed to June 20 through July 20, to be consistent with other USFWS recommendations surrounding spectacled eiders.

Volume 1, Section 2.8 Oil and Gas Abandonment, Page 66

[43.016] ROP G-1 CPAI requests that BLM retain the following language from the 2007 IAP/SEIS: "Ensure the final disposition of the land meets the current and future needs of the public." This strategy ensures that future decisions will consider the realities of the situation at the time, and not be unreasonably constrained by decisions made without specific knowledge of the realities of the future situation.

Volume 1, Section 2.8 Additional Protections that apply in Select Biologically Sensitive Areas - Lease Stipulation/BMP Rivers, Page 72

[43.017] ROP K-1: This stipulation establishes setbacks measured from the river banks' highest high water marks as determined by the hydrology at the time of application. CPAI suggests that the method of measurement of setbacks should be consistent with that established in the Northwest Planning Area, where setbacks are measured from the centerline of rivers. Having different methods of measuring setbacks along rivers in the different planning areas can only create confusion and inconsistency. Additionally, it is likely more difficult in most cases to identify a highest high water mark than a river centerline.

Volume 1, Section 2.8 Additional Protections that apply in Select Biologically Sensitive Areas, Page 84

[43.018] ROP K-4b: This ROP is confusing and contradictory because areas with molting black brant are not available for oil and gas leasing. The ROP does indicate who would be required to conduct a minimum of 2 years baseline for black brants or why such would be needed if permanent facilities cannot be constructed in such areas.

Volume 1, Section 2.8 Additional Protections that apply in Select Biologically Sensitive Area, Page 85

ROP K-5a:
1. CPAI believes it is not necessary to have a minimum of four years of specific study data prior to construction of facilities given that this herd has been extensively studied and documented by the State of Alaska and other entities and the general life cycle patterns of this herd are known. However, CPAI does support continued monitoring of caribou post-development to document impacts, if any, on the overall herd movements in relation to oil and gas operations.

2.**[43.019]** . BLM does not provide any scientific basis for evacuating a road corridor if large numbers of caribou are moving through. Current standard practice in North Slope oil fields is for all vehicles to stop and allow passage of caribou, regardless of the number. It would likely be difficult and possibly more impacting on the caribou to evacuate a road section once a large group of animals have moved in, thus the more practical and less impacting action would be to stop traffic and allow the caribou to pass.

[43.020] CPAI commented earlier about ramps over pipelines as an alternative to a raised pipeline. Ramps were tried, studied and discounted in the 1980s. In the absence of studies showing both that existing methods are ineffective and that, contrary to earlier studies, ramps would be effective, there is no basis to reconsider ramping.

Volume 1, Section 2.8, Additional Protections that apply in Select Biologically Sensitive Areas, Page 87

[43.021] ROP K-5a1: This stipulation would require reduced speed for most of the summer which would be problematic for operations. Currently, CPAI voluntarily reduces speeds during calving season only along those portions of the road system proven to be high-calving density areas. Oil field worker training and vigilance, along with North Slope driving training and wildlife interaction training has resulted in few, if any, caribou-vehicle collisions. Studies have also shown that caribou in these fields have become habituated to much of the oil and gas activities without a population level response. The Teshekpuk Herd is relatively similar to the Central Arctic Herd in size and life-history characteristics; thus it could reasonably be anticipated that the Teshekpuk Herd will ultimately habituate to development over time. Therefore, although CPAI supports the development of a vehicle use plan, it does not believe that a specific vehicle-use monitoring plan is necessary nor that the speed restrictions are appropriate or scientifically based.

Volume 1, Section 2.8, Additional Protections that apply in Select Biologically Sensitive Areas ROP K-5b, Page 89

[43.022] ROP K-5b: Stopping traffic throughout a defined area for up to four weeks in an attempt to prevent displacement of calving caribou is not practical or scientifically proven to reduce displacement or other impacts on calving caribou. CPAI requests scientific data and studies that provide the basis for this mitigation stipulation.

Volume 1, Section 2.8 Additional Protections that apply in Select Biologically Sensitive Areas, Page 97

[43.023] ROP K-12e2(a): BLM does not provide a scientific basis for evacuating a road corridor if large numbers of caribou are moving through. Current standard practice in North Slope oil fields is for all vehicles to stop and allow passage of caribou, regardless of the number. It would likely be difficult and possibly more impacting on the caribou to evacuate a road section once a large group of animals have moved in, thus the more practical and less impacting action would be to stop traffic and allow the caribou to pass.

Volume 1, Section 2.8 Additional Protections that apply in Select Biologically Sensitive Areas, Page 97

ROP K-12e2(b): Stopping traffic throughout a defined area for up to four weeks in an attempt to prevent displacement of calving caribou is not practical nor is it scientifically proven to reduce displacement or other impacts on calving caribou. CPAI requests scientific data and studies that provide the basis for this mitigation stipulation.

ATTACHMENT 2: DETAILED COMMENTS ON FACTUAL ERRORS, OMISSIONS, AND CONCERNS

General Comment- When discussing wildlife resources, the draft IAP/EIS as currently written could lead a reader to mistakenly believe that oil and gas exploration and development will have only negative impacts. It is likely that some wildlife species will benefit from scientific studies

conducted to support development, and from habitat restoration projects in the State of Alaska through programs such as the U.S. Corps of Engineers 'in lieu' fee program.

Volume 1, Chapter 2.1 Introduction

Volume 1, Section 2.1.2 Special Areas and Other Areas with Additional Protections, Page 16

a. Teshekpuk Lake Special Area - Note that during the development of the NW NPR-A IAP, CPAI commented to the BLM that CPAI could accept the Teshekpuk Lake Special Area. CPAI still recognizes that this existing Special Area is important not only for bird nesting (including molting black brant), but is also an important subsistence area and important to the Teshekpuk Caribou herd for local movements to the coast for insect relief and calving south of Teshekpuk Lake. CPAI continues to support the existing Special Area designation but does not support expansion.

b. Colville River Special Area – CPAI recognizes that the Colville River is important for recreation, subsistence and nesting raptors (e.g., peregrine falcons). While CPAI currently does not plan for operations in this location in the foreseeable future, it would like to understand when development could be considered in this and in all of the Special Areas.

[43.024] Furthermore, BLM should consider reducing or eliminating the Colville River Special Area, which was originally created to protect the Arctic Peregrine Falcon after it was included in the list of threatened and endangered species under the Endangered Species Act (ESA). After the designation of this Special Area, the Arctic Peregrine Falcon was removed from the list of threatened and endangered species in 1994. Despite the delisting, the Colville River Special Area is maintained, without explanation or basis, at its current size in all four Alternatives under consideration; and expanded conservation measures are proposed to cover all raptor species, none of which are threatened or endangered. Instead of the proposed expansion of applicable measures, the BLM should consider dissolving this Special Area because the purpose for which it was created no longer exists.

c. The Utukok River Uplands Special Area – CPAI has no comments on this area.

d. Kasegaluk Lagoon – CPAI has no comments on this area and recognizes its importance for waterfowl and subsistence (beluga whales) activities.

In sum, all four alternatives include the management of large Special Areas, which have associated stipulations, ROPs, and BMPs that could prevent the construction of a pipeline or future development within the NPR-A. The acreage of Special Areas is substantially increased in Alternatives B and C through the expansion of Special Use areas (e.g., Teshekpuk Lake Special Area) and/or creation of new Special Areas (Peard Bay Special Area). Some of the existing Special Areas should be reduced or eliminated as explained above. The Alternatives as currently proposed would result in up to 67 percent of the entire NPR-A being designated with Special Area status, which may prohibit future development and pipeline construction. This is an unacceptable outcome for an area dedicated by statute for the exploration for and development of oil and gas resources. The BLM should not consider expansion of current or creation of new Special Areas and should consider dissolving the Colville River Special Area as its initial purpose is no longer relevant.

Volume 1, Section 2.3 Description of the Alternatives

Volume 1, Section 2.3.2 Description of Alternatives: Alternative B, Page 19 and 20

[43.025] a. This comment references the following language found on page 20:
While this plan makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea, such a corridor could be accommodated in this alternative, subject to appropriate conditions developed through a NEPA process. This infrastructure would not be allowed, however, on lands where new non-subsistence infrastructure is prohibited.

Clarification is needed to explain where the construction of this infrastructure would or would not be allowed. This language appears as part of Alternative B (Volume 1, page 20 at the top) and Alternative C (Volume 1, page 21, 4th to last paragraph); however, it does not appear as part of Alternative A or D. CPAI cannot identify anywhere that describes any lands "where new non-subsistence infrastructure" is prohibited other than map 2-2, Alt B. The area shown on Map 2-2, Alt B around Teshekpuk Lake that is "Unavailable" could be problematic for a potential Chukchi Sea pipeline corridor. Additionally, the term "non subsistence infrastructure" is undefined but would commonly be interpreted to include much more than oil and gas infrastructure.

[43.026] b. Wilderness terminology - The term 'wilderness' should be used cautiously as it can be confused with the designation of a Wilderness Area. Is the use of the term 'wilderness' intended to be the same term used to describe certain lands in the contiguous 48 states? If not, clarification is recommended. If the term is intended to refer to the Wild Lands initiative previously implemented by the BLM, CPAI would point out, as many commenter's previously stated when the Wild Lands initiative was first announced, that the Wilds Lands initiative was proposed without any public input or process and appears to be an attempt to impose new Wilderness Areas through management of lands to the same standards, in violation of ANILCA.

c. Wild and Scenic Rivers Designation – CPAI does not support any of the proposed designations for rivers to be part of the National Wild and Scenic River System. There is no rationale, purpose or reference to a map depiction of which parts would be included or what the proposed buffers where non-subsistence activities would be precluded given in Chapter 2. Nonetheless, the IAP/EIS should present a detailed rationale, purpose and depiction in order to provide some basis on which to analyze and comment on the draft IAP/EIS. Existing operations to date on the North Slope have shown that such areas can be managed under stipulations and practices currently in place.

Volume 1, Section 2.3.3 Alternative C, Page 21- 22

[43.027] a. The USGS statement that the resource potential in the southern area of NPR-A is not economical appears to contradict other ongoing projects. The State of Alaska is currently evaluating construction a road into this area to support resource extraction.

[43.028] b. Wild and Scenic River Designation - There is no rationale, purpose or depiction given for the designation of rivers to be part of the National Wild and Scenic River System and as a matter of principal, CPAI does not support the designation of rivers in the NPR-A as "Wild and Scenic Rivers". In order to provide the proper basis for public comment, the draft IPA/EIS must present a rationale, purpose and depiction for such a proposal. Because there is no discernible purpose or benefit, CPAI suggests that it might be more beneficial to identify management priorities and criteria for rivers in the Petroleum Reserve.

[43.029] c. Teshekpuk Lake Special Area -There is no basis or justification given for this level of expansion for Teshekpuk Lake Special Area. Such an expansion clearly would impact a party's ability to lease, develop, construct and operate pipelines (including Chukchi lines) or construct and operate a potential Seawater Treatment Plant in the Petroleum Reserve. As a result, the basis and justification for such an expansion must be provided before the draft IAP/EIS can be validly issued for the required public comment period.

d. Peard Bay Special Area – CPAI agrees that this area is an important area for marine mammals and water birds, as well as subsistence. However, operations on the North Slope to date show that existing management approaches included in stipulations, ROPs, and BMPs will adequately protect this area. CPAI suggests that the BLM revisit the rationale, purpose and need for the designation of this area as a Special Area and consider managing the area more flexibly and beneficially with existing stipulations, ROPs and BMPs.

Volume 1, Section 2.3.4 Alternative D, page 22

CPAI prefers Alternative D.

Volume 1, Section 2.3.4 Alternative D, page 23

[43.030] a. Hunting and Fishing - This alternative states that temporary hunting, fishing and trapping could occur. It is CPAI's current policy and practice to not allow employees or contractors to fish or hunt or trap while on any of its oil and gas leases or involved in any exploratory or study activities. This statement does not appear in other alternatives so it is unclear why it would appear here. If this prohibition is not needed in the other alternatives, it is not needed here.

Volume 1, Section 2.3.5 Stipulations and Required Operating Procedures/Best Management Practices, Page 28

In general, CPAI supports the concepts of Required Operating Procedures (ROPs) and Best Management Practices (BMPs) (Vol. 1, Section 2.3.5). However, CPAI is concerned about establishing fixed procedures in circumstances where technological advancements may render some of the stipulations and operating procedures obsolete. We encourage BLM to incorporate flexibility into ROPs and BMPs by accommodating exceptions for these procedures as new technology becomes available.

CPAI is also concerned that the application of ROPs and BMPs may prevent timely permits and approvals for proposed operations, which is a major challenge for North Slope operators. Once obtained, certainty associated with implementation requirements is essential and, accordingly, inconsistent interpretation of regulations by agencies presents a significant risk. BLM frequently leaves application of additional operational restrictions and mitigation measures to the discretion of an authorized officer to meet "objectives of stipulations." Including this type of open-ended disclaimer statement in the ROPs and BMPs creates significant project uncertainties for parties proposing projects for possible development of resources in the NPR-A, or infrastructure across NPR-A to support development of Beaufort or Chukchi resources. Additional mitigations, BMPs, and determinations should not be left to the discretion of Agency individuals, but should instead be fully identified with the issuance of permits so that all regulatory requirements are known to the operator in advance of committing to development operations.

Volume 1, Section 2.4 Alternatives Considered but Eliminated from Detailed Analysis

Volume 1, Section 2.4.1 Recommending Wilderness Designation by Congress, Page 30

CPAI agrees with BLM that detailed analysis of 'Wilderness' designation is not appropriate.

Volume 1, Section 2.4.4 Reduce or Eliminate Special Area, Page 31

CPAI agrees with the statement that no detailed analysis is warranted.

[43.031] Volume 1, Section 2.4.5 Determining Wild and Scenic River Suitability in the Northern Part NPR-A, Page 31

BLM needs to clarify the intent of this section. It is inconsistent and confusing when, in one section, BLM says that detailed analyses are not warranted, and then conversely, in another section, BLM recommends additional rivers or segments of rivers to be added to the Wild and Scenic Rivers System.

Volume 1, Section 2.4.6 Recommending Establishment of a National Wildlife Refuge in All or Part of NPR-A, Page 32

CPAI agrees that designating the entire NPR-A as a National Refuge System is out of scope for this document. Such a designation would require congressional action and is inconsistent with the provisions and intent of the NPRPA and ANILCA.

[43.032] Volume 1, Section 2.5 Monitoring and Inventory, Page 32

CPAI is disappointed that the BLM only chose to list the monitoring and/or inventory projects with which it is actively involved. The BLM is, however, involved as a member of the North

Slope Science Initiative (NSSI), both as an Oversight Group representative, and a participant on the Senior Staff panel. The NSSI compiles an annual database listing the types of monitoring projects being conducted on the North Slope of Alaska, including the Petroleum Reserve. CPAI suggests that the BLM consult this list of projects in order to provide a representative list of monitoring projects conducted and proposed within the Petroleum Reserve for completeness. The list provided in this draft IAP/EIS significantly understates the extent of research and monitoring efforts within the Petroleum Reserve and in the North Slope generally that would offer data and insight for the Petroleum Reserve.

Volume1, Section 2.7 Healthy Neighbor Policy, Page 35

In general, CPAI supports some of the concepts included in the Healthy Neighbor Policy; however, the "examples of elements" ranges from reasonable to undoable and none appear to have any basis in need or authority. CPAI has a proven history of conducting its North Slope operations with processes resulting in a healthy living and working environment. BLM states that its proposed infections disease and alcohol/drug trafficking plan elements come from "experiences elsewhere." Any analysis must address the significant differences in North Slope operations from operations in other areas, particularly in the contiguous 48 states with more extensive road systems and operations located closer to more populated areas. CPAI provides more extensive comments on the proposed elements in the discussion of Section 4.3.21.5 (Potential Mitigation Measures) below.

Volume 1, 2.8 Comparison of the Consequences of Each Alternative: Table 2-3. Alternative stipulations and required operating procedures/best management practices: Facility Design and Construction, Page 54

[43.033] Seawater for Development - In the creation of hypothetical developments, BLM assumes that seawater used for injection into oil reservoirs would come from the Kuparuk seawater treatment plant. While this might be the case at present, for planning purposes, the BLM needs to maintain the flexibility to allow a seawater treatment plant on the coast of the Petroleum Reserve if needed to support future operations in lieu of using freshwater sources inland. CPAI opposes the unsupported and presumptive prohibition of constructing a seawater treatment plant within ¾ mile of the coast line.

Volume 1, Chapter 3.3 Biological Resources

Volume 1, Section 3.3.2.4 Wetlands and Floodplains and Climate Change, Page 201-202

CPAI notes that this scenario focuses on drying lakes and decreased precipitation. While climate related change has been observed on the large scale of the pan-Arctic region (such as impacts to sea ice) and with regard to some parameters, can be assessed for future anticipated changes with varying degrees of uncertainty and regional variation, assessing climate change impacts for a site-specific location like the NPR-A is complex and far more uncertain. [See for example, the U.S. Fish & Wildlife Service Notice of 12-month petition finding, 74 Fed. Reg.12932-01 (Mar. 25, 2009), regarding the uncertainties and variable predictions of future assessments of climate changes to arctic terrestrial and freshwater systems (74 Fed. Reg. at 12944-47)]. The extreme conditions and sparse population in the Arctic create significant challenges to monitoring various parameters over time and there are relatively few documented field measurements or observations by researchers to support any conclusions as to cause, impact or timing of any changes or to improve current predictive modeling efforts. Precipitation is probably the variable of most focus in the hydrologic cycle with regard to climate change discussions and precipitation predictions are subject to the same complexities and uncertainties.

In summary, predictions or relevant climate change impacts for site specific locations are not predictable with any reliability at the present time. Potentially, an alternate scenario resulting in more precipitation could occur and things would not operate the way BLM asserts. The BLM should consider models resulting in other outcomes and incorporate those possible results into the analysis in the IAP/EIS.

Volume 1, Section 3.3.4.2 NPR-A Fish Habitat Units, Page 206

[43.034] CPAI is disappointed that BLM does not recognize, include or discuss the extensive lake and fish habitat data sets sponsored by CPAI. It is unreasonable and arbitrary for the draft IAP/EIS to represent to the audience reading this IAP/EIS that there are fewer datasets than there actually are. The BLM should review and incorporate the many data sets that CPAI has provided on this topic.

Volume 1, Chapter 3.4 Social Systems

Volume 1, Section 3.4.11.2 Employment, Page 457

The end of the first paragraph in this section indicates that there is low hiring of local residents by the oil and gas industry. CPAI has sponsored numerous interns through its programs with some success. Such efforts cannot be one sided. To be more successful, the affected communities have to engage in the programs and support the individuals in completing their training.

Volume 1, Section 3.4.12 Public Health, Page 464

[43.035] There appear to be numerous references to data from the Kotzebue area, in the Northwest Arctic Borough and not in the NPRA. The draft IAP/EIS does not address whether there is similar information for the North Slope Borough. There is no discussion about how North Slope residents heat their homes (i.e. heating fuel) and the poor ventilation in most homes as potentially contributing to poor health (asthma, etc.). There is also no reference to data from CPAI's air quality station in Nuiqsut. The draft IAP/EIS states incorrectly there is no data for this area. Furthermore, the community of Nuiqsut (within the boundary of the NPRA) is supplied with clean burning natural gas from CPAI's Alpine production facility and that fact should be included in the discussion.

Volume 1, Section 4.3.5.12 Health Determinants, Page 480

Table 3-54 is a good visual description of the multiple factors that contribute to public health issues.

Volume 2 Chapter 4: Environmental Consequences

Volume 2 As a general comment, it appears that these new potential mitigation measures are being evaluated for all Alternatives. They are described in Alternative A, but only referenced in the other alternatives.

Volume 2, Section 4.2.1.2 Oil and Gas Exploration and Development Activities - Assumptions, Page 47

[43.036] CPAI requests clarification of the anticipated future leasing and exploration activities in the Petroleum Reserve. The BLM assumptions listed below directly contradict earlier BLM statements regarding anticipated seismic activity over the next 10 to 20 years.

Industry would aggressively lease and explore the tracts offered, which could require large number of exploration wells and seismic surveys.

This assumption contradicts BLMs previous statements regarding limited future seismic exploration. See Volume 2, Page 16, Section 4.2.1.2 Oil and Gas Exploration and Development Activities, Exploration which states:

Two seismic surveys per year… should not be seen as the most likely average for the next 10 to 20 years. As of recent there have been no significant discoveries or emerging trends that would encourage similar seismic activity.

Please explain or clarify this contradiction.

[43.037] CPAI also requests that BLM remove the following assumption in this section:

"Each producing horizontal well is assumed to require a horizontal injection well."

This generalized assumption should not be used because injection well use is made on case-by-case bases and is closely tied to individual reservoir management.

Volume 2, Section 4.2.1.2. Oil and Gas Exploration and Development Activities - Assumptions , Page 49

CPAI believes that BLM should address the potential for future unconventional oil and gas development in the Petroleum Reserve, contrary to the following statement:

"This IAP/EIS does not anticipate any unconventional oil and gas development in the NPR-A."

Based on recent activities proposed by other operators on the North Slope, it is reasonable to assume that such development may occur in the Petroleum Reserve in the foreseeable future.

Volume 2, 4.2.1.1 Development Scenarios by Alternatives, Figure 4-11, page 52

[43.038] In text accompanying Figure 4-11, the number of wells at the existing CD3 and CD4 pads is incorrect and the number of wells listed for CD5 is also potentially low.

Volume 2, 4.2.1.1, Development Scenarios by Alternatives, Page 53

[43.039] CPAI believes that, while the following statement is generally correct, it fails to account for pre-development seismic data acquisition:

Exploration seismic data acquisition would not occur as the majority of this area in northeast NPR-A has been covered by 3-D surveys. A basic assumption for this analysis is that exploration seismic surveys would not be repeated in areas for which survey data are already available.

Although this is generally correct for exploration seismic activity, it does not address the probability that seismic data acquisition may be conducted to support development purposes once exploration is complete and prior to production. The following statement on page 54 is incorrect for the same reason:

"That said, new and advanced seismic data surveys would likely be acquired over these producing fields within 10 to 20 years of initial production to enhance recovery of hydrocarbons"

CPAI requests clarification of BLM's expectations for ongoing seismic activity.

Volume 2, Section 4.3.2.2, Oil and Gas Exploration and Development Activities, Page 54

[43.040] CPAI notes that the statement "Seismic surveys always precede exploratory drilling for oil and gas..." is incorrect. Although seismic surveys are generally performed in advance of exploratory drilling, the statement is inaccurate as written. CPAI requests that BLM revise this sentence.

Volume 2, Section 4.3.5.2, Oil and Gas Exploration and Development Activities, Pages 123 – 125

[43.041] BLM lists negative impacts associated with the placement of gravel fill without including discussion about the standard mitigation measures employed by the oil and gas industry. For example, to prevent ponding along the roads, multi-year hydrologic surveys are conducted along proposed road routes to identify areas where cross drainage structures should be installed during construction.

Dust fallout on vegetation is minimized by frequent road watering practices and restrictions on speed limits for vehicles. These measures are either imposed via a permit or conducted on a voluntary basis by industry and should be included within the text of the IAP/EIS for reference.

[43.042] Volume 2, Section 4.3.5.2, Oil and Gas Exploration and Development Activities – Material Sites, Page 125

The statement that no surveys have been conducted to assess gravel sources is incorrect. Over a period of two winter seasons (2001 and 2002), CPAI commissioned geotechnical coring operations within the NE NPR-A for just purpose. An area identified as Clover Mine Site, south of the proposed development of CD5 and Greater Mooses Tooth Unit (GMTU) has been

identified as a potential gravel source. The ASRC gravel material site, east of the Nigliq channel, is also a gravel source that may be used for NPR-A activities.

[43.043] Volume 2, Section 4.3.5.5 Potential New Mitigation Measure - Weed-Free Vehicles (new required operating procedure), Page 125

In order to be effective, due to the nature of the issue, measures for minimizing the introduction of non-native species should be required for all activities, not just oil and gas related activities (for new equipment, vehicles, tourism, regulatory activities, etc.).

[43.044] Volume 2, Section 4.3.5.4 Conclusion, Page 129

BLM notes that impacts to vegetation from non-oil and gas industry activities would be minimal and short term. It is important to include reference to and analysis of the miles of impacted tundra leading to/from local communities, either from snow machines during periods of low snow cover, or from ATVs. Depending on the type of vegetation (upland, dry tussock versus wet/moist tundra), the extent of the trails could be visible for years. The BLM analysis ignores and underestimates the impacts from these existing non-oil and gas activities. BLM should include all sources of potential impacts in this analysis and not just those related solely to the oil and gas industry.

Volume 2, Section 4.3.5.4 Conclusion, Page 130

The draft IAP/EIS text states that vegetation would be impacted long term from spills from oil, chemicals, and/or saltwater unless they were from small spills that would be cleaned up immediately. CPAI practice is to clean up all spills, regardless of size, immediately and if necessary, implement a vegetation recovery and monitoring plan. BLM is correct in that smaller spills could recover more quickly (within 3-5 years) but it should be noted that even larger spills may recover within a decade if not less, depending on the material released and the receiving environment.

ALTERNATIVE A - Subsection 4.3 Birds [pgs 90-332]

Volume 2, 4.3.8.3, Effectiveness of Stipulations and Required Operating Procedures, Page 177

CPAI is concerned about the statement of undetermined effectiveness of the additional protections under Alternative A as stated below:

As there has been no oil and gas development yet in the NPR-A, it is difficult to determine the effectiveness of the above mentioned operating procedures and stipulations. Required operating procedures and stipulations that have been in effect to date regulate exploratory activities, and thus far, seem to be effective in protecting birds and bird habitats.

The uncertainty stated here ignores the decades of existing development across the North Slope and the many studies that have been conducted. As a result, it also calls into question the basis for proposing the Peard Special Area, expansion of existing Special Areas and proposals for Wild and Scenic River designations.

(Same comment also applies to Volume 2, 4.3.11.2, Effectiveness of Stipulations and Required Operating Procedures, Page 241)

[43.045] Volume 2, Section 4.3.11.4 Special Status Species of Marine Mammals, Potential Mitigation Measure 5: (Addition to H-1 ROP) Vessel Operation during Fall Bowhead Whale Migration, Page, 270

CPAI requests that BLM eliminate the following proposed ROP from consideration for the reasons described below.

"c.6. Barge operators scheduling transits during the fall bowhead whale migration and in the vicinity of bowhead whale subsistence hunting areas are required to demonstrate participation in the Open Water Season Conflict Avoidance Agreement (CAA) Process conducted by the

AEWC, including adherence to a communications schedule to ensure mitigation of potential impacts to marine mammal subsistence hunting."

Industry participation in the AEWC process is not and cannot lawfully be required. While CPAI voluntarily participates in CAA discussions regarding avoiding potential impacts to marine mammals and subsistence hunting of marine mammals, BLM cannot require that third parties reach agreement, and CPAI has not executed a CAA in recent years due to failure of the parties to reach full agreement on terms. The government has no authority to require that two third parties reach agreement, as is reiterated in the latest NMFS DEIS at Section 5.3.1. BLM should defer to the NMFS IHA requirements for a Plan of Cooperation (POC) that include the requirement for communication plans. The NMFS DEIS provision is provided below.

In 1985, the AEWC and a number of arctic offshore oil and gas operators began working together to identify and mitigate sources of industrial interference with bowhead whale subsistence hunting. Recognizing the need to facilitate the co-existence of marine mammal subsistence uses and arctic offshore industrial activities, in 1986, Congress amended the MMPA to require that the issuance of ITAs rest on a Secretarial finding of "no unmitigable adverse impact to the availability" of marine mammal subsistence resources. The AEWC and offshore operators undertook an annual initiative to develop mitigation measures, which came to be known as the Open Water Season Conflict Avoidance Agreement (CAA) Process, with each year's CAA Process resulting in an agreement, the CAA, signed by the participants. Input from the impacted bowhead whale subsistence communities indicates that they have historically found that the CAA process, through its highly interactive aspects, has effectively resulted in the development and implementation of measures that will ensure no unmitigable adverse impact. Based on this, for many years, NMFS generally assumed, with some associated analysis, that if a company and the AEWC signed a CAA (which typically contained the components of a POC), then it was possible for a company to conduct their activity without having an unmitigable adverse impact on the subsistence hunt. However, in more recent years, some companies have become reluctant to sign a CAA with the AEWC, suggesting that the agreement requires more from the industry than is necessary to ensure no unmitigable adverse impact to the hunt. Additionally, some stakeholders have raised the issue that a CAA developed by the AEWC does not represent the interests of subsistence hunts of species other than bowhead whales. Last, NMFS and BOEM have no authority to require agreements between third parties, and neither NMFS nor BOEM would be able to enforce the provisions of CAAs because the federal government is not a party to the agreements. These concerns highlight NMFS' responsibility to conduct a rigorous and comprehensive independent analysis of the likely subsistence impacts and to specifically review the contents of each company's POC. However, the AEWC has raised concerns about the POCs, asserting that while the CAA process traditionally provided content for the regulatory POC process, the POC process as currently implemented by some companies takes place in a one-way fashion, i.e., the company develops a POC without meaningful input from the subsistence communities. To date, individual companies conducting activities in a given year, as well as the impacted subsistence communities, are involved in meetings related to both the negotiation of CAAs (regardless of whether they are ultimately signed by either party) and the development of POCs. Participating in both of these processes necessitates a lot of work on the part of all parties. With input from both subsistence communities and the applicants for MMPA authorization, NMFS plans to explore methods of clarifying the requirements of the MMPA (as they relate to the POC and ensuring no unmitigable adverse impact) that would incorporate the effective pieces of the CAA negotiations, while continuing to ensure compliance with the MMPA as it relates to the subsistence hunt of all affected species. "

Volume 2, Subsection 4.3.18, Wilderness Characteristics Alternative A, Page 312

Please see CPAI's general comments on pages 3 and 4 of this letter regarding wilderness areas and special areas.

Volume 2, Section 4.3.21.5 Potential Mitigation Measures

[43.046] Volume 2, 4.3.21.5 Potential Mitigation Measure 1 - Infectious Disease (new required operating procedure), Page 347

Measure 1 would require lessees to develop and submit a plan with the listed elements to prevent the outbreak of infectious disease. Some required elements are already in place (e.g., hand washing stations, voluntary flu vaccinations, compliance with government regulatory reporting requirements). While CPAI can support the concept of Healthy Neighbor Policy (Section 2.7 Volume 1); these "examples of elements" range from reasonable to undoable and unauthorized. CPAI supports responsible and practical "Healthy Neighbor" policies and this support is reflected in its existing practices and operational history on the North Slope. Proposed plan elements that CPAI supports and that are consistent with its practices include:

- Hand washing stations
- Voluntary vaccination programs
- Public health notifications of reportable illness/disease to the State of Alaska by law [4].
- Appropriate access to relevant drugs for the most commonly encountered communicable diseases in CPAI's North Slope employee populations.
- Adequately trained medical staff (physician assistants) at the main camps like Alpine and Kuparuk.

CPAI does not support:

- Requirements to vaccinate.
- Providing sexual health training and condoms.
- Maintaining staff to support diagnosis, collection or treatment of STDs.
- Expansion of the list of reportable illnesses beyond the requirements of Alaska state law (i.e. pandemic flu would be reported, seasonal flu would not).

The required plan elements described above are unprecedented and go far beyond the remit or authority of the BLM to manage federal lands and resources in the Petroleum Reserve. Any program requiring vaccination of employees raises numerous legal issues and concerns including ADA issues, Title VII issues, and privacy issues (especially in Alaska). Nonetheless, BLM does not cite any authority for that requirement. With regard to the requirement to provide sexual health training and condoms, there is no basis or authority for that requirement. There is no evidence that STDs are more common or associated with oil and gas lessees' employees or contractors on the North Slope. The requirement of maintaining staff or supplying staff to support diagnosis, collection or treatment of STDs would impose an unreasonable burden without any evidence that the issue of STDs exists as a result of oil and gas lessees' employees or contractors presence on the North Slope or, more particularly, in the Petroleum Reserve. With regard to expanding the list of reportable illnesses, CPAI reports those illnesses and diseases that are by state law to be reported but should not be burdened with additional reporting not required by state law.

The wording in these requirements describes "transient" oil and gas lease workers but that term is not defined nor does it appear to apply to many of CPAI's employees and its contractors' employees. While CPAI's North Slope employees and its contractors' employees may work week on/week off (or longer tours), many have worked these schedules for years or decades. Such consistency hardly fits the common definition of "transient" workers.

Furthermore, no evidence has been shown to exist that supports BLM's underlying premise that the transmission or receipt of communicable diseases (including STDs) is an issue related to oil and gas lessees' employees or contractors presence on the North Slope or in the Petroleum Reserve. Although there have been gravel roads and ice roads constructed by the oil and gas industry for many years (including many ice roads in the Petroleum Reserve), which local residents have used, at CPAI's North Slope oil and gas facilities, CPAI's employees do not bring personal vehicles and are not allowed to travel off-site during their tour of duty on the North Slope except for business purposes requiring travel to a village. No changes in that policy are planned. North Slope residents travel beyond the bounds of their own villages to other villages or cities and hence are both exposed to and may expose others to communicable diseases

unrelated to oil and gas lessees' employees presence in the Petroleum Reserve. Persons other than oil and gas lessees' employees visit the villages on the North Slope and may be sources and recipients of these diseases while on the North Slope. Unless the BLM can provide evidence that this is an issue significantly associated with Petroleum Reserve lessees' employees or contractors (and there is no such evidence), and that the BLM has the authority to impose such requirements, then this proposed mitigation measure must be deleted [5].

[43.047] Volume 2, Section 4.3.21.5 Potential Mitigation Measure 2: Alcohol and Drug Use, Page 348

Mitigation Measure 2 would require private parties (the oil and gas lessees) to implement "surveillance for use by individuals transporting alcohol and drugs into the North Slope Borough." CPAI objects to this requirement because it is vaguely written, does not consider the implications of government required searches, and CPAI already has effective programs regarding alcohol and illicit drug presence and use at its facilities. Hence, there is no basis or authority for this requirement.

CPAI's North Slope operations are already "dry villages" – CPAI prohibits alcohol and illicit drug presence and/or use in all of its North Slope facilities. CPAI's policies and programs are strictly enforced. **[43.048]** CPAI does not support submitting its alcohol and drug use prevention plan to BLM as a regulatory requirement, however, because (1) the term "surveillance" is not defined and as used, is very vague and unclear; (2) BLM has cited no legal authority for BLM to impose such a requirement in its role as land manager; and (3) under Alaska law, it would appear that any such "surveillance" that includes any search or seizure requirement then becomes a government search or seizure subject to constitutional constraints and CPAI would become an agent of the federal government in that process (e.g., Lowry v. State, 707 P.2d 280). It would appear here that "surveillance" here is intended to include search and seizure; if not, then it is entirely unclear how any effective result could be achieved. The issues presented would be particularly apparent where it would be a government requirement that CPAI search third party vehicles driven by individuals who are not CPAI employees or contractors but who are present on CPAI roads. There have been gravel roads and ice roads constructed by the oil and gas industry for many years (including many ice roads in the Petroleum Reserve), which local residents have used. CPAI roads at various times cross over state, federal and private lands, which invoke different authorities and jurisdictions. At CPAI's North Slope oil and gas facilities, CPAI's employees do not bring personal vehicles and are not allowed to travel off-site during their tour of duty on the North Slope except for business purposes requiring travel to a village. At this time, no changes in that policy are planned. CPAI's programs have a proven history of effectiveness, and CPAI objects to the concept of becoming a government agent in this arena. BLM has not presented any evidence that alcohol and drug trafficking on the North Slope (and specifically in the Petroleum Reserve) is an issue related to Petroleum Reserve lessees' employees or contractors. CPAI's corporate policies and security practices are already proven sufficient to meet the stated objective without changing the status of the policies and programs.

Volume 2, Section 4.3.21.5 Potential Mitigation Measure 3: Employment, Page 349

Workforce Development - Currently there are a number of local North Slope employment initiatives and workforce development training already in place--through industry, North Slope Borough, ASRC, Ilisagvik College and the village corporations. Efforts have been made in Nuiqsut, with internships and Career Quest as examples. CPAI will continue to support workforce development training into the future.

[43.049] Shifts – CPAI is concerned that the proposed shift schedule provisions are contrary to Equal Employment Opportunity (EEO) laws. While the term "consider" gives some flexibility, CPAI's operational and safety needs should not be sacrificed to provide for such accommodation. The bullet currently reads:

Scheduling of shifts will consider the unique needs of local workers, including the consideration of shorter-duration stays in work camps for workers from the North Slope Borough and subsistence leave for hunters employed in the oil and gas sector.

Allowing preferential work shift duration and leave for cultural or lifestyle considerations appears to create a discriminatory class not allowed under EEO law. CPAI is unaware of any legal basis for such accommodation and it is probably true for all workers who work on a remote site that they would like a shorter duration shift and special leave considerations.

Ultimately, this section is vague and poorly drafted with the use of "consider" and "needs" and includes what appears should be a non-exhaustive list of actions. "Needs" creates a sort of imperative that dilutes the application of "consider" (i.e., one usually "considers" requests and preferences, but "meets" "needs"). Careful use of the term "need" should be made as the interpretation is subjective to a specific group or cass. CPAI recommends rewriting this section to clearly indicate the consideration of non-need factors. CPAI recommends that the suggested list of actions is just that – a suggestion. Lastly, CPAI dislikes the broad reference to "employed in the oil and gas sector." It suggests that perhaps CPAI will require contractors to make similar accommodations. This creates issues of co-employment to which CPAI objects. Therefore, CPAI requests this to section to read:

Scheduling of shifts may consider the unique cultural, environmental, and lifestyle factors affecting local workers (e.g., shorter-duration stays in work camps for workers residing in the North Slope Borough where job considerations allow, flexibility in leave scheduling for subsistence hunters employed by Lessees).

Consultation targets- **[43.050]** The requirement/standard on page 349 states that "Lessees will be encouraged to develop targets for Iñupiat participation in consultation with the North Slope Borough and village corporations."

The requirement/standard is poorly drafted and the requirements are vague and unclear. It appears (given the context of the mitigation measures) that BLM intended to say: "Lessees will be encouraged, in consultation with the North Slope Borough and village corporations, to develop targets for Inupiat employment." As written, it could also be read to require targets for participation in the actual consultation, but that would appear to be inconsistent with the title of the mitigation measures – "Employment." CPAI requests BLM to clarify the meaning/requirements in this bullet point.

Assuming BLM meant to say what CPAI thinks it meant to say, there is still a problem with the word "target." It is unclear what "target" means. Equal Employment Opportunity (EEO) regulation prohibit "quotas" but allow "goals, including placement goals." The difference is that quotas are "binding" targets (i.e., the employer is going to meet the number requirement no matter what) while goals are non-binding or desired targets. Therefore the meaning of "target" is essential to fully understand this statement and evaluate its legality.

For example, the federal regulations that govern Affirmative Action Programs for federal contractors provide:

Placement goals may not be rigid and inflexible quotas by which must be met, nor are they to be considered as either a ceiling or a floor for the employment of particular groups. Quotas are expressly forbidden. 41 CFR 60-2.16 (e)(1).

If the term "target" is read to suggest that CPAI must hire a certain number of Inupiat personnel (i.e., meet a quota), then the result could be that more qualified non-Inupiats may not get hired. This raises EEO discrimination issues.

The federal regulations that govern Affirmative Action Programs for federal contractors further provide:

In all employment decision, the contractor must make selections in a nondiscriminatory manner. Placement goals do not provide the contractor with a justification to extend a

preference to any individual, select an individual or adversely affect an individual's employment status, on the basis of that person's race, color, religion, sex, or national origin.

. . .

Placement goals may not be used to supersede merit selection principles. Affirmative action programs prescribed by the regulations in this part do not require a contractor to hire a person who lacks qualifications to perform the job successfully or hire a less qualified person in preference to a more qualified one. 41 CFR 60-2.6(e)(2), (4)..

With placement goals, the provision would appear more compliant with EEO requirements. Ultimately, it appears that BLM is requiring CPAI to engage in an Affirmative Action program for Inupiats (i.e., meeting placement goals). While "affirmative action" (as defined by the federal government) " is designed to ensure equal employment opportunity, affirmative action does not require a CPAI to hire a less-qualified applicant. See 41 CFR 60-2.10, 60-2.16(e).

Therefore, **[43.051]** CPAI requests the removal of the term "target" and focus on either the "expansion of outreach and recruitment" terminology or substitute "placement goals" in order to use a federally defined EEO term that alleviates the ambiguity. The two requirements/standards could read:

- In consultation with the North Slope Borough and village corporations, Lessees will be encouraged to engage in expanded outreach, recruitment and job opportunity awareness with respect to Inupiat workers.
- In consultation with the North Slope Borough and village corporations, Lessees will be encouraged to develop " "placement goals," as defined by the federal government, for Inupiat participation.

Volume 2, Section 4.3.21.5 **[43.052]** Potential Mitigation Measure 4: Siting of Work Camps (new required operating procedure), Page 350

Requiring operators to get a joint decision from village leadership and native corporations on location of work camps is problematic at best. Again, this is apparently a requirement that third parties reach agreement for a government purpose, for which there is no basis in law. For work camp locations, the underlying land owner must agree to the location and the location must meet the regulatory requirements for all such work camps. The provision, if there could be a legal basis, is also too vague and unclear to be implemented. What is intended by "village leadership"? Does this refer to the local tribal government or the town or municipal administration? Which native corporations: the village corporations, the regional corporations, or both? These various entities and persons do not always agree with one another and local entities will sometimes insist the camp location be on corporation land for financial benefit.. Furthermore, "close proximity to a village" is not defined so it is not clear when one would be required to have a detailed "site management plan". This proposed provision needs to be reconsidered both for clarity, intent, and likelihood of reasonably being implemented.

Volume 2, Section 4.3.21.5 **[43.053]** Mitigation Measure 5—Public Health Monitoring, Page 350

Measure 5 is not a proposed requirement for lessees, but a vague and unenforceable requirement that the State institute a regional public health monitoring program related to impacts due to oil and gas (but inexplicably, not to any other activities). Neither BLM nor any BLM lessee can direct the State of Alaska to implement such a program. Furthermore, many of the health issues have not been and cannot be linked to directly to oil and gas activities so the purpose and benefit of implementing such a monitoring program are unclear at best.

CPAI does not support a broad measure like this without having a baseline first. If indeed this initiative moves forward without a baseline, CPAI requests that all Petroleum Reserve lessees be part of the discussions establishing the duties and responsibilities of the board or consortium.

Pursuant to the proposed stipulation, the State of Alaska would be required to design and implement a public health monitoring program that focuses on health outcomes and/or

determinants of local concern that can be attributed to oil and gas activity. Similar to our concern to the proposed 2007 Public Health Monitoring Stipulation, CPAI believes the proposed stipulation is unenforceable and inappropriate for the following reasons.

First, the BLM has not stated any legal authority for requiring a state government to implement such a program. This authority issue also raises additional questions such as who will provide the funding and what is the impact on Petroleum Reserve lessees of the State of Alaska not implementing such a program?

Second, the stipulation lacks clarity and is subject to uncertainties and differing interpretation. BLM gives no direction to the possible health indicators or threshold levels that would be included in such a Public Health Monitoring program. Second, all these potential mitigation cause some problems. The direct link of impacts to oil and gas activities is still clearly suspect. The BLM tries to make the case in Volume 2, but in Volume 1--there are number of statements that tend to say that the issues are caused by many factors...for example:

Vol 1, page 463. "These diseases and health conditions are multifactorial—that is, they arise from a complex combination of factors that affect populations and the individuals within them."

Vol 1 page 470: "High rates of smoking in the North Slope Borough may be a primary cause of high respiratory disease rates. However, it is not possible to estimate the possible contribution of environmental factors to chronic respiratory disease in the area (National Research Council 2003)."

Vol 1, page 471: "Like people in many other places, Alaska residents are concerned about environmental contamination as a possible contributor to cancers, there is no easy way to determine whether or to what extent environmental factors play a role. What is known is that tobacco smoking is currently a large contributor to cancers among Alaska Natives and circumpolar Inuit, and directly contributes to high rates of lung cancer and overall cancer mortality. "

Vol 1, page 473: "However, concern has been raised that changing of the landscape, water supply and subsistence food practices (including food harvesting, preparation and storage) caused by climate change, development activities, or other causes, could cause an increase in the rates of parasitic diseases experienced by humans (Brubaker et al. 2011). "

Volume 2, Section 4.4.3.2, Oil and Gas Exploration and Development Activities – Development and Production, Page 358

CPAI encourages BLM to adopt the case-by-case summer tundra travel standard provided in Alternative A on page 168 and ROP L-1.

ALTERNATIVE B - Section 4.4 [pages 345 – 461]

Volume 2, Subsection 4.4.11.4 - Polar Bears, Page 423-424

[43.054] The IAP/EIS needs to present additional information, if it exists, to support the following statement:

Minimizing the effect of activities ... could become increasingly important as polar bear numbers continue to decline, and the effectiveness of various mitigation measures and management actions will need to be continually evaluated.

CPAI does not believe, and the draft IAP/EIS does not present any reliable evidence, that oil and gas exploration and development have been correlated to the loss of sea ice. In the absence of such, the IAP/EIS statement quoted above needs to be reconsidered and revised.

Volume 2, Section 4.4 Subsection 4.4.14.3, Page 439

CPAI asserts that enlarging three special areas and creating a new one is premature and does not warrant additional ROPs and mitigation measures. The draft IAP/EIS states that:

As there has been no oil and gas development yet in the NPR-A, it is difficult to determine the effectiveness of the above mentioned operating procedures and stipulations. Required operating procedures and stipulations that have been in effect to date regulate exploratory activities, and thus far, seem to be effective in protecting birds and bird habitats

Operations on the North Slope to date show that existing management approaches included in stipulations, ROPs, and BMPs will adequately protect this area. CPAI suggests that the BLM revisit the rationale, purpose and need for the proposed Special Area designation and expansions and consider managing the areas more flexibly and beneficially with existing stipulations, ROPs and BMPs.

(see also Subsection 4.3.8.3, Page 177 above)

Volume 2, Section 4.4 Subsection 4.4.17, Wild and Scenic Rivers, Page 447

CPAI does not support any of the proposed designations for rivers as Wild and Scenic River Systems. There is no rationale, purpose or reference to a map depiction given for which parts of rivers would be designated nor the buffers that would be imposed. Nonetheless, the IAP/EIS should present a detailed rationale, purpose and depiction in order to provide some basis on which to analyze and comment on the draft IAP/EIS. Existing operations to date on the North Slope have shown that such areas can be managed under stipulations and practices currently in place.

ALTERNATIVE C - Section 4.5

Volume 2, Section 4.5.9.2 Effects of Disturbances, Oil and Gas Development, Caribou, Page 507

[43.055] CPAI believes that the following statement is incorrect and needs to be reconsidered and revised:

"Previously, no North Slope caribou herd has been exposed to oil and gas activities year-round."

BLM fails to take into account the Teshekpuk Lake herd present in the Alpine Development area that straddles the State/Arctic Slope Regional Corporation (ASRC) lands on the east side of the Nigliq Channel and the ASRC/BLM lands on the west side of the channel. The assumptions of mortality and reduced calf productivity presented in the draft IAP/EIS appear to be unsubstantiated.

Volume 2, Subsection 4.5.11.4 Special Status Species of Marine Mammals – Conclusion – Polar Bears, Page 534

The IAP/EIS needs to present additional information, if it exists, to support the following statement:

Minimizing the effect of activities ... could become increasingly important as polar bear numbers continue to decline, and the effectiveness of various mitigation measures and management actions will need to be continually evaluated.

CPAI does not believe, and the draft IAP/EIS does not present any reliable evidence, that oil and gas exploration and development have been correlated to the loss of sea ice. In the absence of such, the IAP/EIS statement quoted above needs to be reconsidered and revised.

Volume 2, Section 4.5 Subsection 4.5.13.2, Alternative C Oil and Gas Exploration and Development Activities, Effects of Development, Subsistence – Nuiqsut, Page 540

CPAI recognizes the importance of subsistence to local cultures. The draft IAP/EIS as written puts the protection of subsistence hunting as the overriding concern. CPAI believes that the BLM's obligation is to seek a reasonable balance approach between exploration and development and other uses, including subsistence uses, of the land.

ALTERNATIVE D – Section 4.6

Since determination of the specific nature of the infrastructure is in its very preliminary stages, it is very important that the least limiting of the alternatives presented be adopted to allow for flexible future management of the Petroleum Reserve.

In addition, the ANILCA 810 Analysis (Appendix A of the IAP/EIS) provides a disproportionately greater review of Alternative D in comparison to the other three alternatives, and uses unsupported conclusions. Alternative D is the alternative that would allow BLM to offer all of the NPR-A for oil and gas leasing, while protecting surface values by means of various management approaches. This approach skews the reviewer's perception that Alternative D would have significant impacts to subsistence activities if this alternative is selected. CPAI believes additional review of resources is warranted and equal analysis should be provided in a fair and balanced manner for all alternatives regarding impacts to subsistence activities and resources.

Volume 3 Environmental Consequences, Sections 4.1 to 4.6

Volume 3, Section 4.7.3.2 Reasonably Foreseeable Future Exploration and Development, Page 33 (3rd paragraph)

With regard to an onshore pipeline and possibly a road from the shore landing of a pipeline from a Chukchi Sea development, the draft IAP/EIS describes that this infrastructure would "cross the NPR-A within the generalized corridors displayed on Maps 2-1C, 2-2C, 2-3C, or 2-4C". These maps are not identified on BLM's webpage (https://www.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=14702)

CPAI does not support pre-defined corridors for this possible future infrastructure as insufficient information exists to define corridors at this time and there is a limited understanding of what might be required (size, number of booster stations, etc.) to create such corridors. This comment also applies to the same IAP/EIS language appearing on page 262 of Volume 3 in the last paragraph.

Volume 3, Section 4.7.3.2 Reasonably Foreseeable Future Exploration and Development – Unconventional Oil and Has Development East of NPR-A, Page 41

CPAI encourages BLM to revise the following statement:

[43.056] "For the purpose of analysis... the BLM will assume that unconventional oil and gas development becomes viable on the better drained lands south of the super-giant Prudhoe Bay oil field and in the general area of the Dalton Highway."

The draft IAP/EIS presents no basis for this statement and it is entirely unclear why unconventional development would occur in these areas and not in the Petroleum Reserve. CPAI believes that this statement likely is an incorrect and shortsighted assumption. (See also Volume 3, Page 181, Subsection 4.7.7.11, Page 181, Paragraph 3)

Volume 3, Section 4.7.7.9 Terrestrial Mammals, Page 140-141

[43.057] On page 140, Line 1 the BLM states onshore oil and gas exploration and development activities are the primary contributing activities in terms of cumulative effects on North Slope and Arctic National Wildlife Refuge (ANWR) mammals. Subsequently, on page 141, paragraph 1, BLM states:

As a result, without controlled experimentation, it may be difficult to determine if effects from these change factors are accumulating at the population level, or if observed fluctuation merely reflect short-term shifts in population numbers.

The BLM should explain this inconsistency,

Volume 3, Section 4.7.7.17 Wild and Scenic Rivers – Past and Present Effects and Their Accumulation – Oil and Gas Exploration and Development Activities, Page 263

[43.058] BLM states that "Past oil and gas exploration has left a mark on several of the eligible rivers in the planning unit." A more correct statement would be

"Past oil and gas exploration has left a mark on lands adjacent to several of the eligible rivers in the planning unit."

CPAI requests BLM adopt this change and explain the significant difference between past historical activities (some of which were conducted by or on behalf of the government itself in the Petroleum Reserve) and the regulatory regimes observed at the time those developments commenced, and the current, more restrictive regulatory regimes. Otherwise, the statement standing alone implies that new developments will have the same impact when that is not necessarily a true statement. Much has been learned and incorporated into subsequent developments since the initial drilling in the Petroleum Reserve, which long predated even the North Slope developments that started in the 1970's.

Volume 3, Section 4.7.7.17 Wild and Scenic Rivers – Past and Present Effects and Their Accumulation – Oil and Gas Exploration and Development Activities, Page 263-4

BLM states:

"If the rivers were found suitable and managed as wild and scenic river areas, the drums and debris would be incompatible, and would be removed subject to availability of funding following the principles of maintaining and enhancing the recreational values."

The designation of rivers as Wild and Scenic Rivers is not necessary to accomplish removal nor is it the purpose of designating rivers as such. Removal of drums and debris has been accomplished in other areas of the North Slope without designations of Wild and Scenic Rivers.

Volume 3, Section 4.8.18 Unavoidable Adverse Effects – Wilderness Characteristics, Page 295

The draft IAP/EIS states that

If it is determined in the future that these activities impair wilderness characteristics, the areas would be excluded from the Lands with 'Wilderness Characteristics Inventory.

While CPAI agrees that any impacts would be temporary and not significant, this statement is confusing at best. If BLM determines that lands have wilderness characteristics and hence apparently would be managed to BLM's wilderness lands classification under current BLM policy, it would not appear, based on BLM prior statements, that BLM would ever approve activities that would impair the wilderness characteristics. As stated in other comments in this letter, the Wild Lands initiative set up, without any public input or public process, a land classification initiative that could have no other purpose than to manage lands to the same level and purpose as if they were Wilderness Areas, in violation of ANILCA. If BLM is pursuing a "Wild Lands" land classification or intends to manage lands to a wilderness classification standard as part of its inventory of Alaska lands, and in particular, any inventory of lands in the Petroleum Reserve, BLM should provide for public input and comment on its proposed program, the authority that BLM is asserting, and the funding sources for such a program in Alaska.

[1] Consistent with the comments of the American Petroleum Institute (API), CPAI additionally observes that that the Alaska National Interest Lands Conservation Act of 1980, (16 U.S.C. §§ 410hh-3233, 43 USC §§1602 -1784 (ANILCA)) directly addresses the establishment of additional conservation system units (including new wilderness areas) in Alaska. ANILCA restricts executive authority to consider such action except as authorized in ANILCA itself or by further acts of Congress. Respectfully, ANILCA is designed to foreclose exactly the actions that the IAP/EIS describes -- the designation of special areas managed for their wilderness values that in essence amounts to the establishment of new de facto conservation units in Alaska. Moreover, the time for any proposal for more wilderness areas even in national parks or wildlife refuges (the Petroleum Reserve is not either) under ANILCA was specifically limited under Section 1317 to five years after the statute's enactment. That window of opportunity has long since

concluded. No provision of ANILCA, or any other controlling law, authorizes such an agency proposal decades later, and such a proposal is precluded by Sections 102(d), 1317 and 1326(b) of the statute.

[2] Approximately 425,000 acres north and east of Teshekpuk Lake are currently deferred from leasing until July 2018. Yet, this area would be adequately protected under any alternative by management direction and best management practices K-1 and K-2. CPAI believes that continuing the deferral of leasing in this area through 2018 is unnecessary.

[3] CPAI believes that this should be designated as "d" under Northwest, Alternative A.

[4] CPAI reports food borne illness outbreaks, sexually transmitted diseases, and other diseases as required by law to be reported.

[5] It must be noted also, that due to the nature of communicable diseases (including STDs), even if these requirements could be imposed, the BLM would have to impose such requirements on all persons who travel to, on or over federal lands on the North Slope. The BLM itself has no such requirements for its own employees who may be present in the Petroleum Reserve and there is no evidence that the BLM's employees are any less (or more) likely than oil and gas lessees' employees to transmit or receive such communicable diseases while in the Petroleum Reserve.

Attachment

Figure 1. Pre-nesting and nesting Spectacled Eiders in the CD-5 area. Pre-nesting surveys conducted on the Colville Delta 1993–1998 and 2006–2011 at 100% coverage. Pre-nesting surveys conducted in NE NPRA 2000–2006 and 2006–2011 at 50% coverage. Nest searches conducted in portions of the CD-5 area in 2001–2004 and 2008. Nests found on ground-based surveys covering areas near facilities or proposed facilities in a subset of years.

Figure 2. Pre-nesting Spectacled Eiders on the Colville River Delta and NE NPRA. Pre-nesting surveys conducted on the Colville Delta 1992–1998 and 2000–2011. Pre-nesting surveys conducted in NE NPRA 2000–2006 and 2008–2011. Nests found on ground-based surveys covering areas near facilities or proposed facilities in a subset of years.

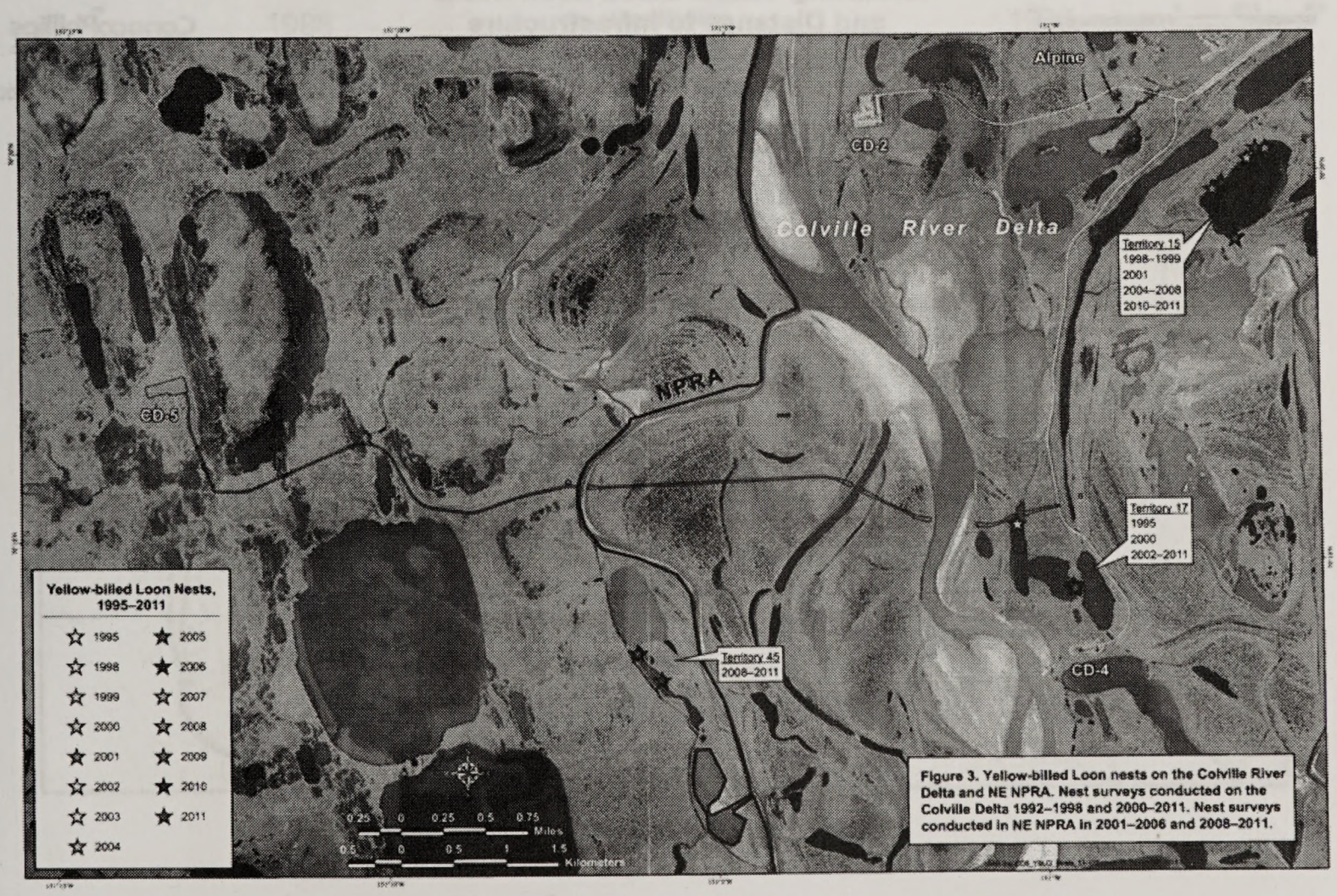
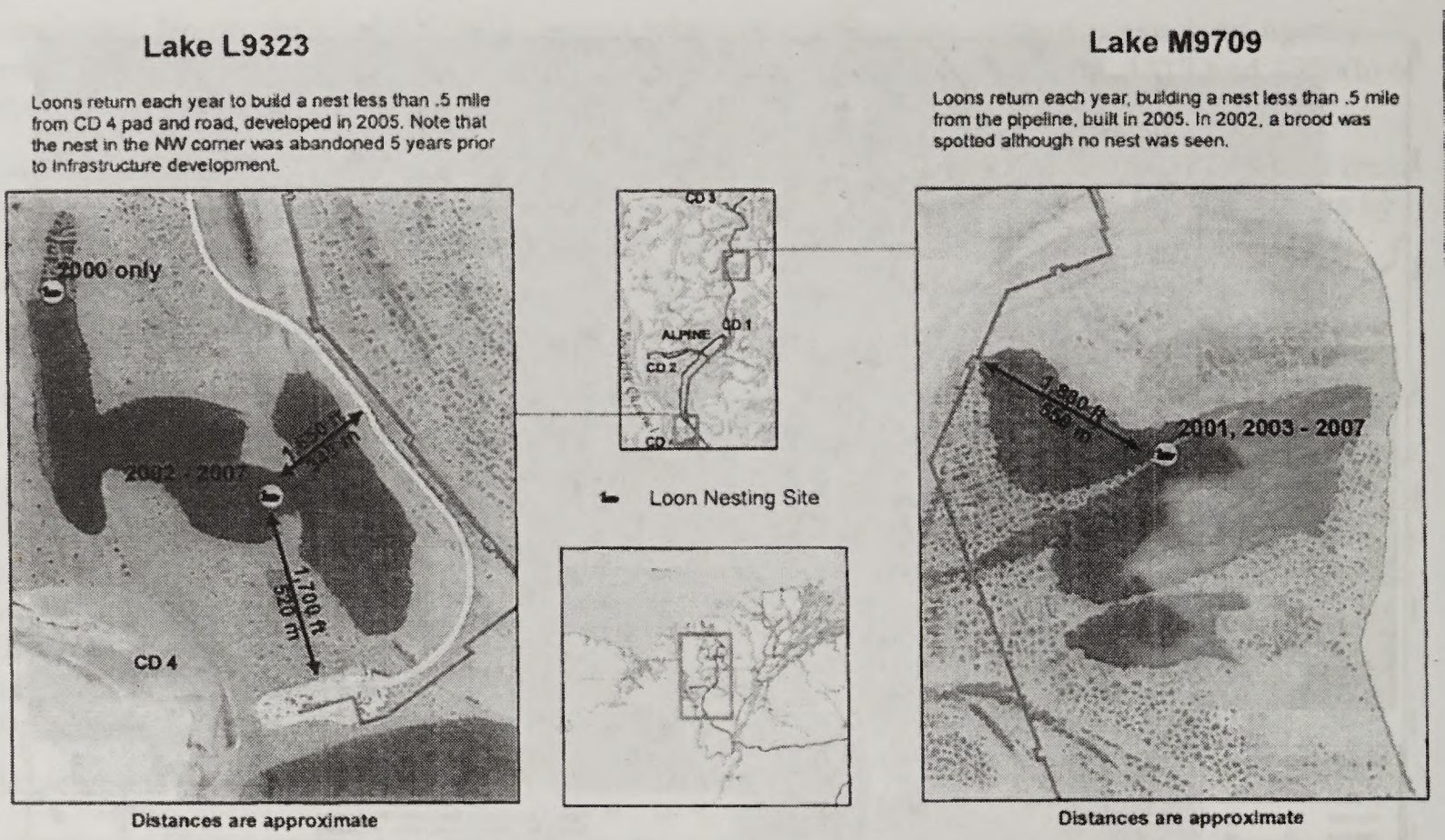
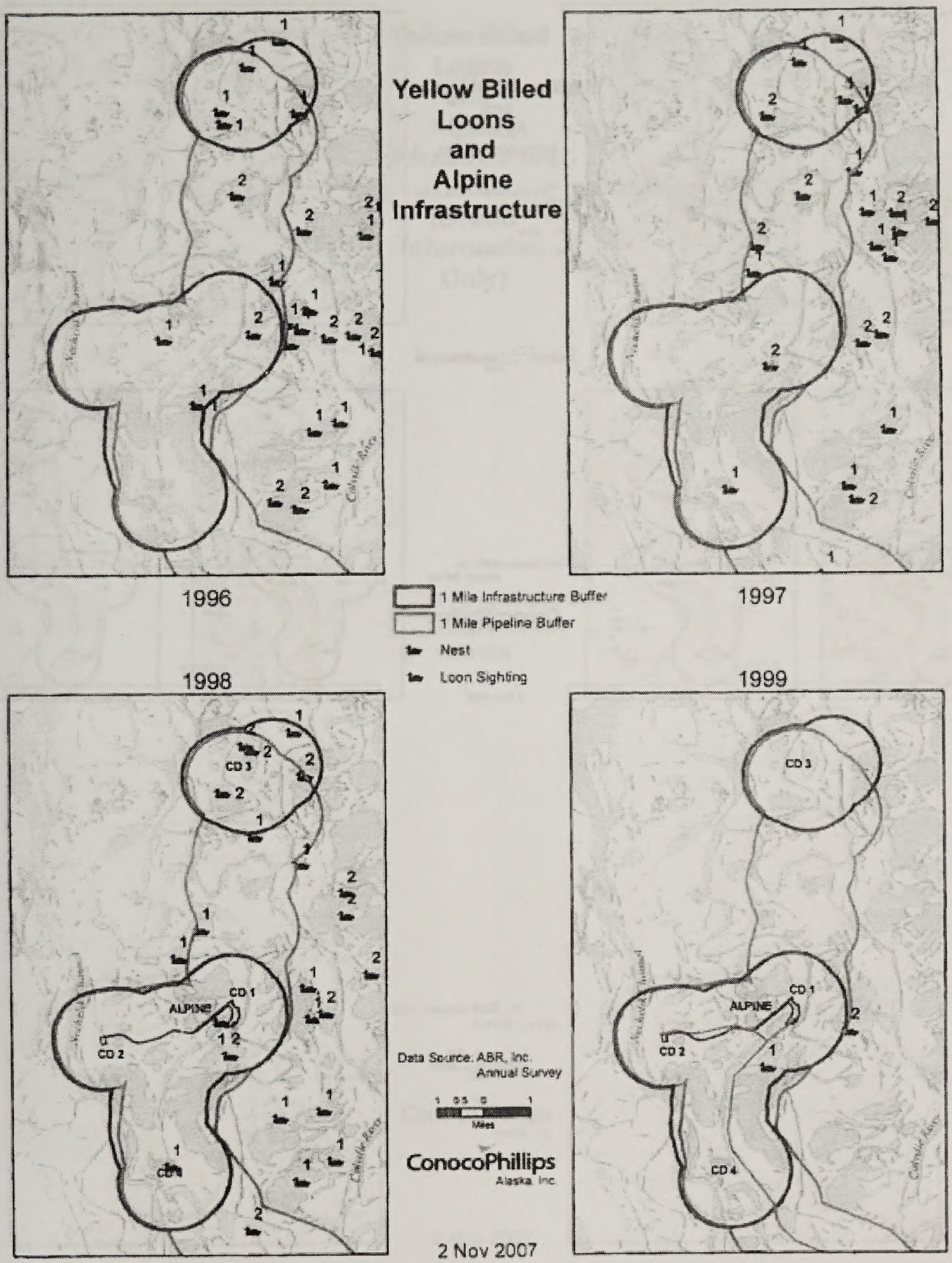
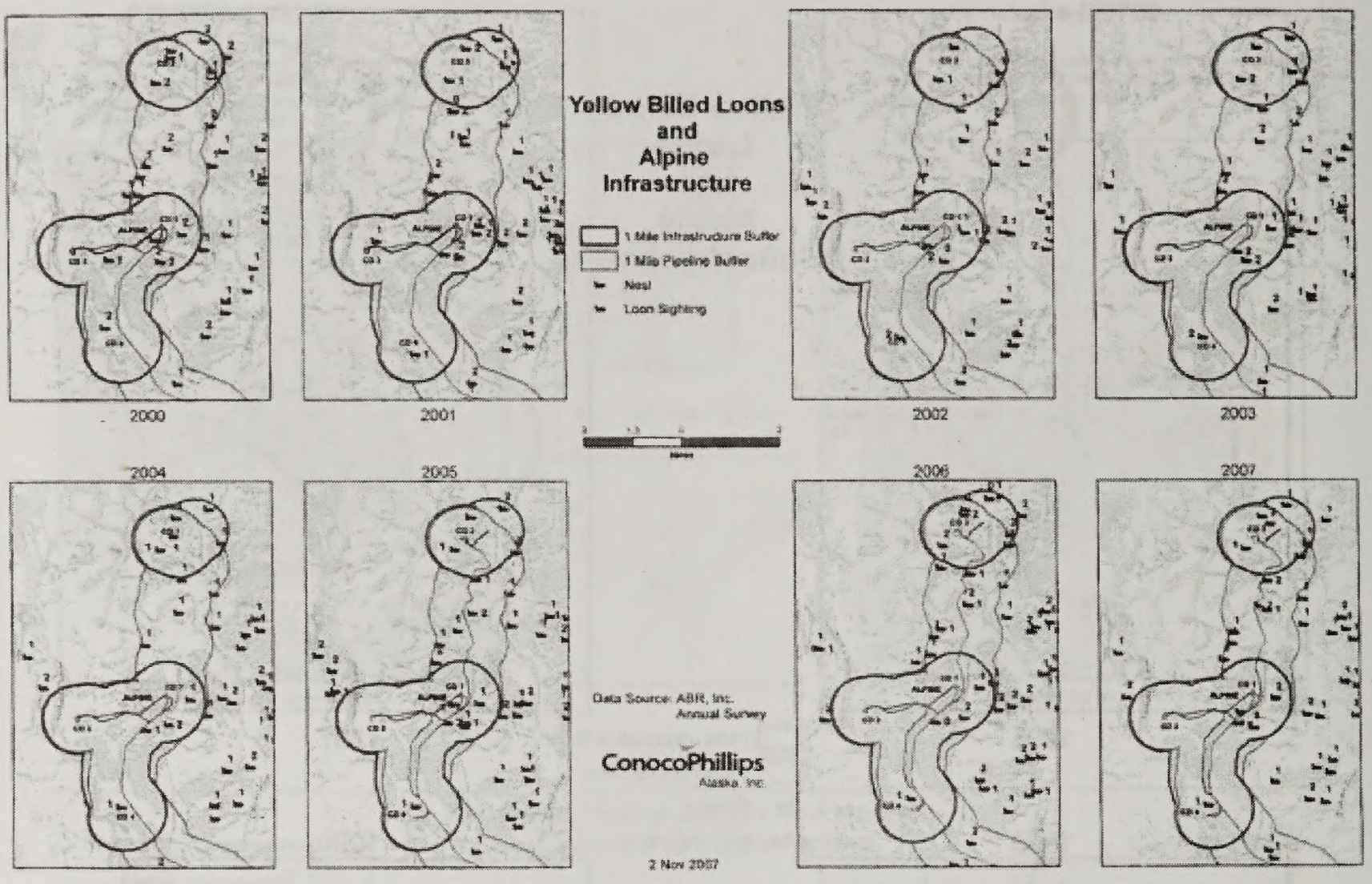
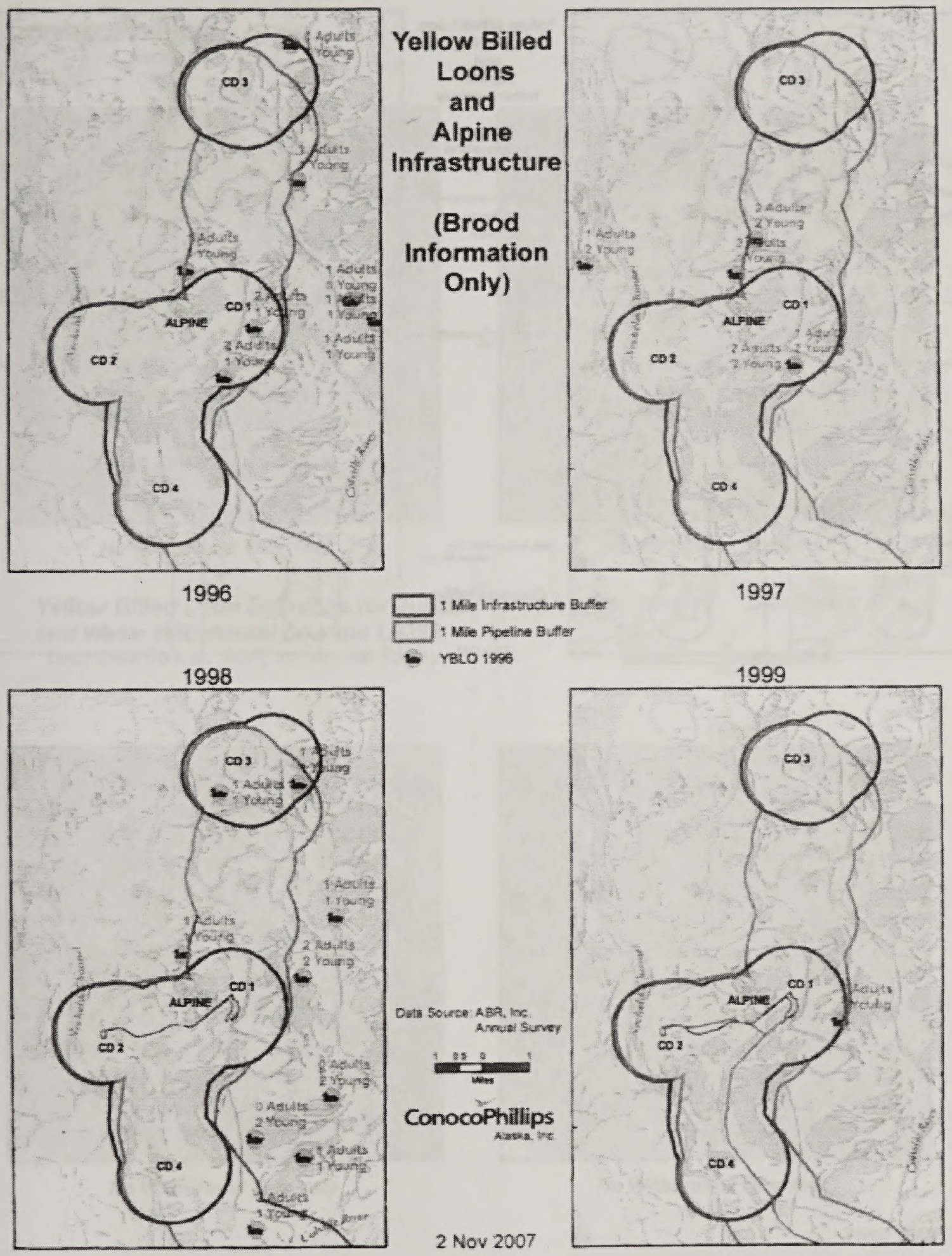


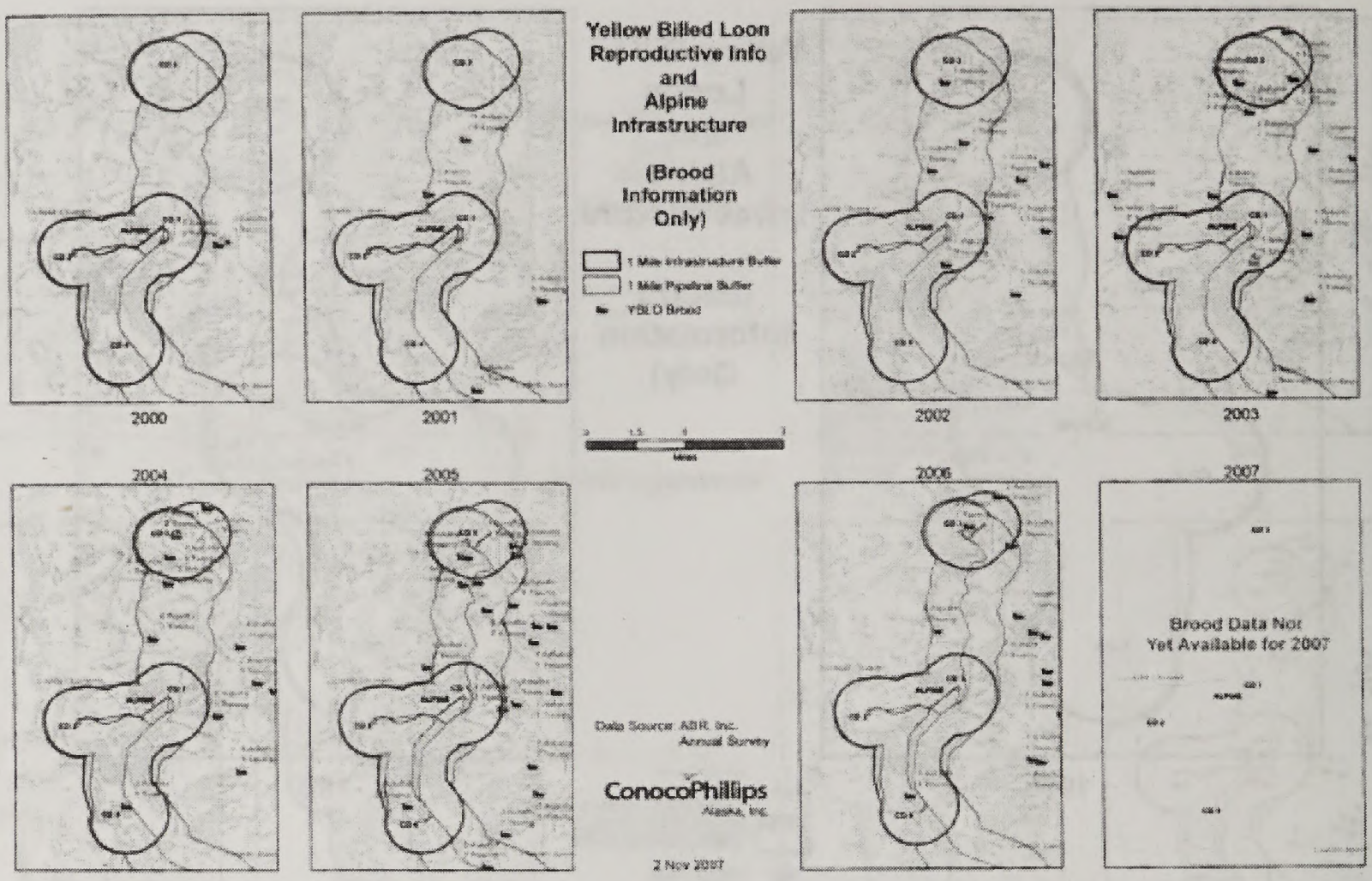
Figure 3. Yellow-billed Loon nests on the Colville River Delta and NE NPRA. Nest surveys conducted on the Colville Delta 1992–1998 and 2000–2011. Nest surveys conducted in NE NPRA in 2001–2006 and 2008–2011.


Lake L9323
Loons return each year to build a nest less than .5 mile from CD 4 pad and road, developed in 2005. Note that the nest in the NW corner was abandoned 5 years prior to infrastructure development.
2000 only
2002 - 2007
1,850 ft
560 m
1,700 ft
520 m
CD 4
Distances are approximate
CD 3
ALPINE
CD 1
CD 2
CD
Loon Nesting Site
Lake M9709
Loons return each year, building a nest less than .5 mile from the pipeline, built in 2005. In 2002, a brood was spotted although no nest was seen.
1,900 ft
580 m
2001, 2003 - 2007
Distances are approximate
0.25 0.125 0 0.25
Miles
250 125 0 250
Meters
Recurring Yellow-Billed Loon Nests
and Distance to Infrastructure
Loon Data Source: ABR, Inc. Annual Survey
ConocoPhillips
Alaska, Inc.
2 Nov 2007


Yellow Billed Loons and Alpine Infrastructure
1996
1997
1998
1999
1 Mile Infrastructure Buffer
1 Mile Pipeline Buffer
Nest
Loon Sighting
CD 1
CD 2
CD 3
CD 4
ALPINE
Data Source: ABR, Inc.
Annual Survey
Miles
ConocoPhillips
Alaska Inc.
2 Nov 2007


Yellow Billed Loons
and
Alpine
Infrastructure
1 Mile Infrastructure Buffer
1 Mile Pipeline Buffer
Nest
Loon Sighting
2000
2001
2002
2003
2004
2005
2006
2007
Data Source: ABR, Inc.
Annual Survey
ConocoPhillips
Alaska, Inc.
2 Nov 2007


Yellow Billed Loons and Alpine Infrastructure
(Brood Information Only)
1996
1997
1998
1999
1 Mile Infrastructure Buffer
1 Mile Pipeline Buffer
YBLO 1996
ALPINE
CD 1
CD 2
CD 3
CD 4
Data Source: ABR, Inc. Annual Survey
Miles
ConocoPhillips
Alaska, Inc
2 Nov 2007


Yellow Billed Loon
Reproductive Info
and
Alpine
Infrastructure
(Brood
Information
Only)
2000
2001
2002
2003
2004
2005
2006
2007
Brood Data Not
Yet Available for 2007
Data Source: ABR Inc.
Annual Survey
ConocoPhillips
Alaska, Inc.
2 Nov 2007

ConocoPhillips
Alaska, Inc.

1996

No Withdrawal This Year

1997

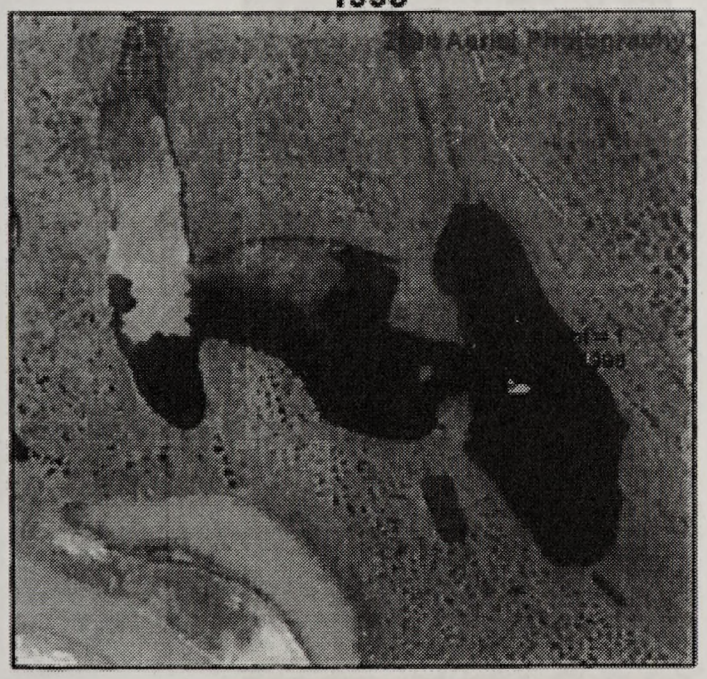
No Withdrawal This Year

Yellow Billed Loon Sightings for June and Water Withdrawal on Lake L9323
Loon Data Source: ABR, Inc. Annual Survey

Nest Loon Sighting

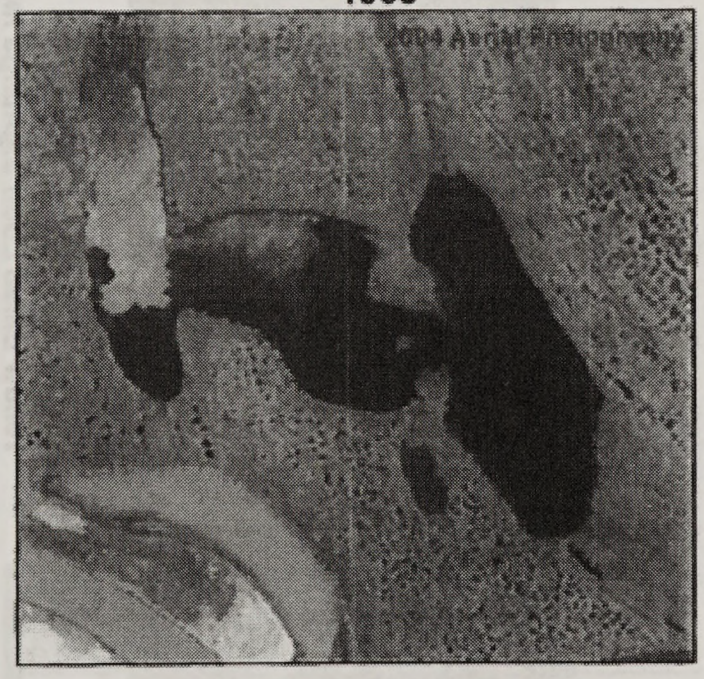
0.2 0.1 0 0.2
Miles

1998



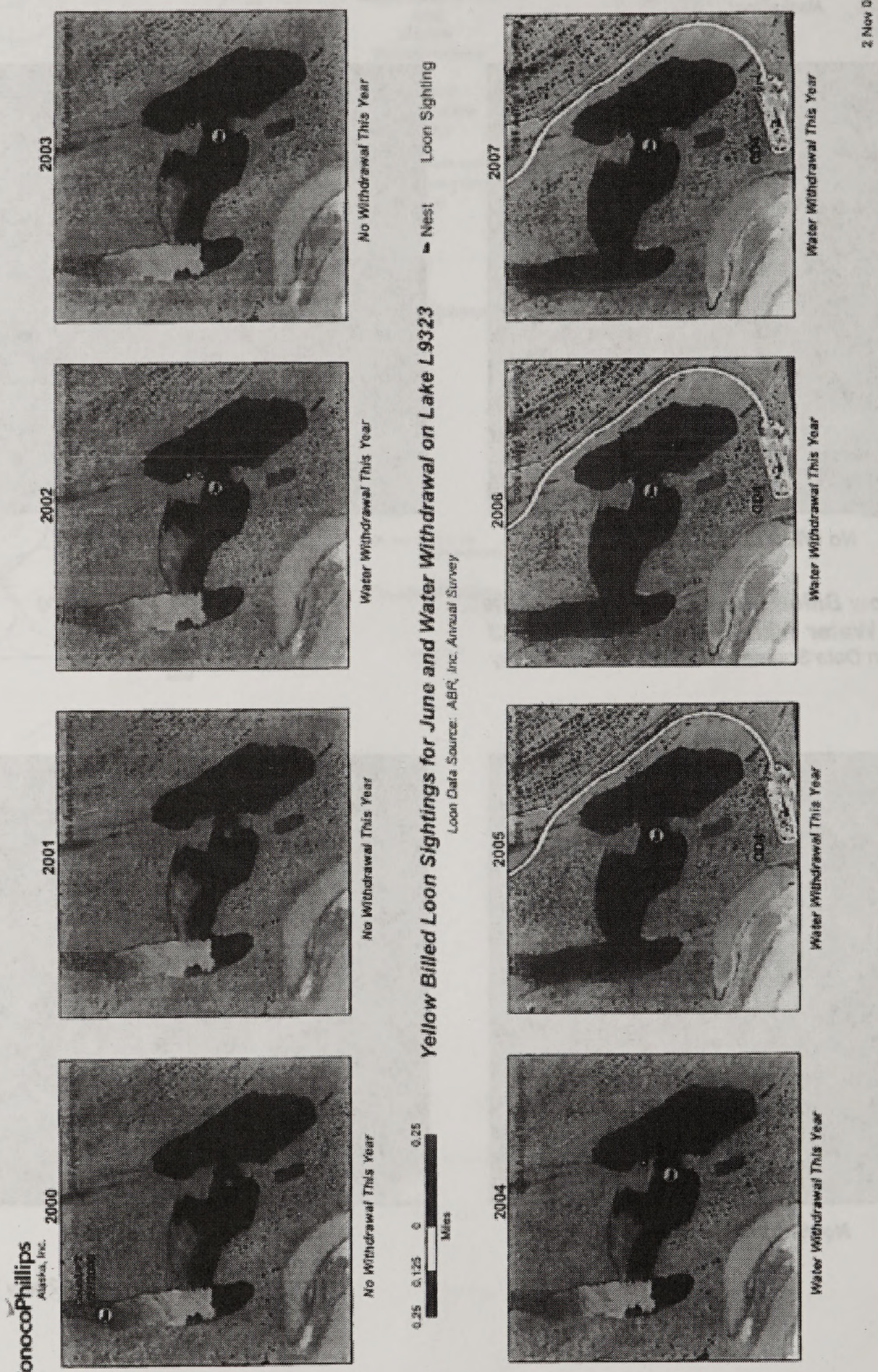
No Withdrawal This Year

1999



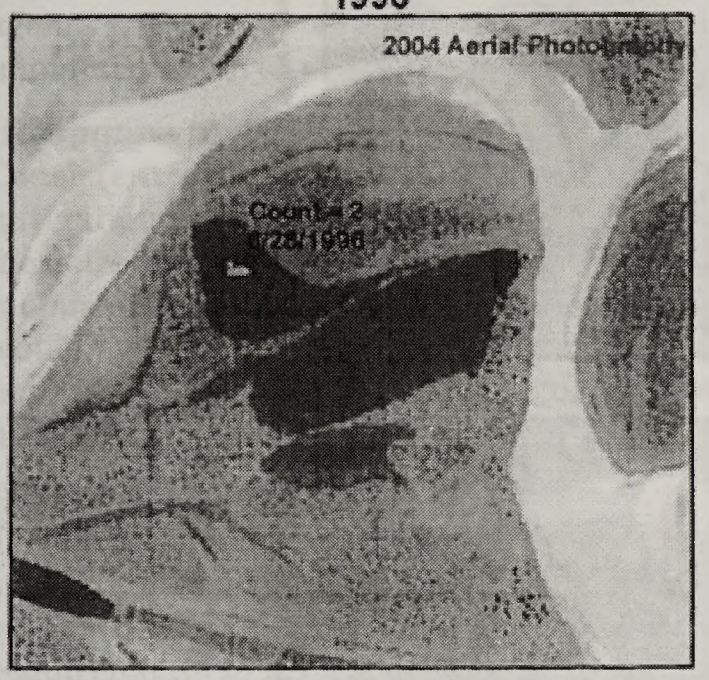
No Withdrawal This Year

2 Nov 2007


Yellow Billed Loon Sightings for June and Water Withdrawal on Lake L9323
Loon Data Source: ABR, Inc. Annual Survey
= Nest
Loon Sighting
ConocoPhillips
Alaska, Inc.
2000
No Withdrawal This Year
2001
No Withdrawal This Year
2002
Water Withdrawal This Year
2003
No Withdrawal This Year
2004
Water Withdrawal This Year
2005
Water Withdrawal This Year
2006
Water Withdrawal This Year
2007
Water Withdrawal This Year
0.25 0.125 0 0.25
Miles
2 Nov 07

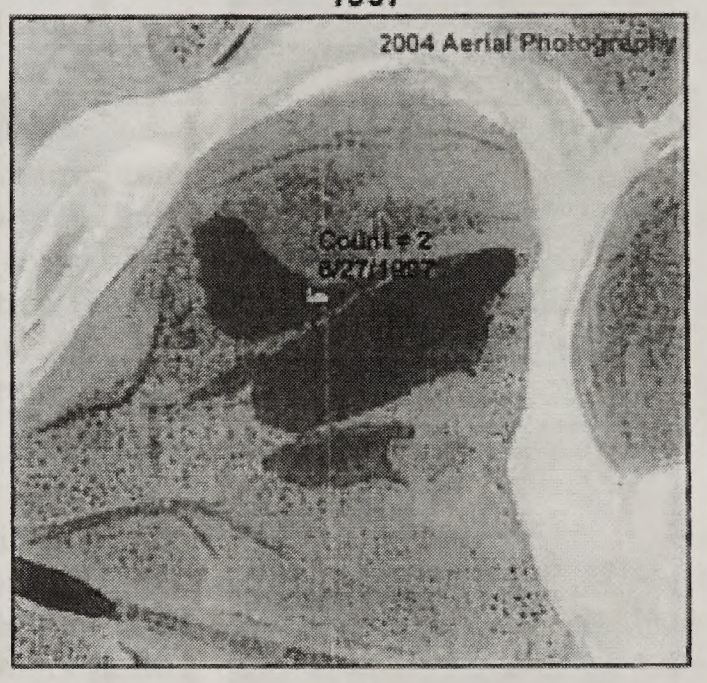
ConocoPhillips
Alaska, Inc.

1996



No Withdrawal This Year

1997



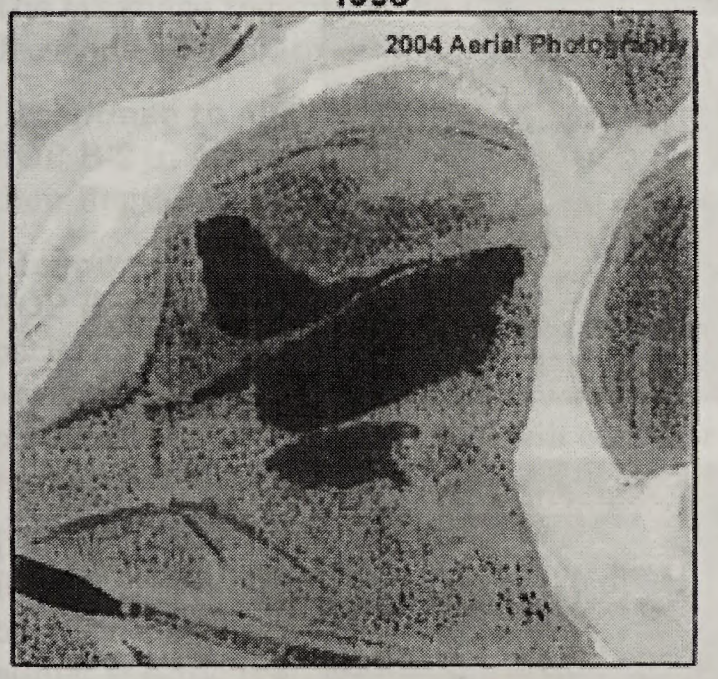
No Withdrawal This Year

Yellow Billed Loon Sightings for June and Water Withdrawal on Lake M9709
Loon Data Source: ABR, Inc. Annual Survey

Nest Loon Sighting

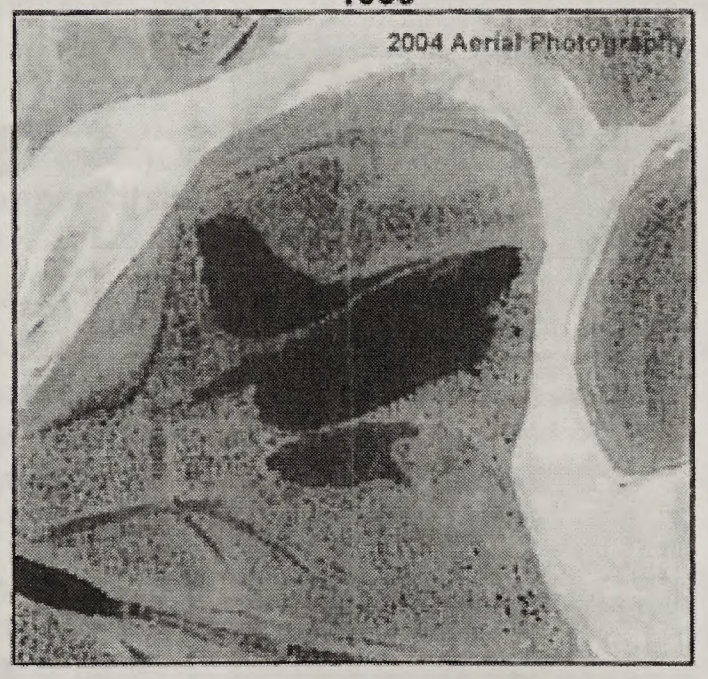
0.3 0.15 0 0.3

1998



No Withdrawal This Year

1999



Water Withdrawal This Year

2 Nov 2007

ConocoPhillips
Alaska, Inc

2000

No Withdrawal This Year

2001

No Withdrawal This Year

2002

No Withdrawal This Year

2003

No Withdrawal This Year

0.4 0.2 0 0.4
Miles

Yellow Billed Loon Sightings for June and Water Withdrawal on Lake M9709

Loon Data Source: ABR, Inc. Annual Survey

Nest Loon Sighting

2004

No Withdrawal This Year

2005

Water Withdrawal This Year

2006

Water Withdrawal This Year

2007

No Withdrawal This Year

2 Nov 07

[Response to 43.001]
Consistent with guidance from the Council on Environmental Quality, the IAP/EIS considers mitigation measures that are outside BLM's jurisdiction. The text of the potential mitigation measure has been modified to better reflect the scope of BLM's mission as a land management agency and to remove the implication that BLM would be the agency that would oversee the implementation of the mitigation measure.

[Response to 43.002]
Consistent with guidance from the Council on Environmental Quality, the IAP/EIS considers mitigation measures that are outside the BLM's jurisdiction. The text of the potential mitigation measure has been modified to better reflect the scope of the BLM's mission as a land management agency and to remove the implication that the BLM would be the agency that would oversee the implementation of the mitigation measure. The BLM does not expect and will not require industry to violate regulatory requirements or create conditions that present safety problems.

[Response to 43.003]
The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques at the time of application for a permit.

[Response to 43.004]
ROP/BMP A-3 indicates that all "appropriate staff shall be instructed regarding these procedures." It is not the BLM's intention to require individuals with no relation to operations in the NPR-A to obtain these instructions.

[Response to 43.005]
The language regarding the Incidental Take Program is part of Alternative A, which reflects decisions made in prior plans. It is not included in any of the action alternatives.

[Response to 43.006]
ROP B-2 in Alternative A and its analog in the action alternatives do not refer to lake size but to their depth, which is an appropriate criterion for permitting water withdrawal.

[Response to 43.007]
ROP B-2(b) in Alternative A and its slightly revised analog in the action alternatives are performance-based measures. The performance-based protection measures afford the BLM the opportunity to adjust specific requirements informed by the latest understanding of the potential of impacts. The BLM will consider any changes that may have occurred in the requirements of other federal, state, and local authorities in its project-specific requirements.

[Response to 43.008]
ROP B-2(d) in Alternative A and its revised analog in the action alternatives are performance-based measures. The performance-based protection measures afford the BLM the opportunity to adjust specific requirements informed by the latest understanding of the potential of impacts. The BLM will consider any changes that may have occurred in the requirements of other federal, state, and local authorities in its project-specific requirements.

[Response to 43.009]
The BLM considered changing the text of the requirement/standard of ROP E-7(b) and its best management practice equivalents in the action alternative, but determined that they provide suitable flexibility. Depending upon the specific proposed development, burial of pipeline may be considered and required, but only after consideration of other options to meeting the objective to minimize disruption of caribou movement and subsistence use.

[Response to 43.010]
The BLM considers it prudent to maintain the current 500-foot distance cited in the requirement/standard at ROP E-7(c). Studies, including one by LGL Alaska Research Associates, Inc. (Cronin, M.A., W.B. Ballard, J. Truett, and R. Pollard. 1994), have shown that additional protection is provided with more than the 350-feet minimum distance between pipelines and roads.

[Response to 43.011]
The BLM considered the suggestion to substitute sighting reports for annual reports, but determined that administratively the annual report was preferable.

[Response to 43.012]
The provisions of required operating procedure E-11 and its action alternative equivalents are not based on conjecture, but are based on science. In 2005 the USFWS and BLM convened a workshop to obtain guidance from a panel of loon experts on how to conserve the yellow-billed loon in arctic Alaska. The workshop goals included sharing information on loon biology and oil field practices, and the potential interactions between these; and identifying management prescription and research necessary to protect, evaluate and monitor yellow-billed loon populations in arctic Alaska, including and evaluation of (at the time) proposed lease stipulations and required operating procedures in the NPR-A planning documents. This panel included Rick Johnson from ABR, Inc. who provided input regarding yellow-billed loons and industrial development on the Colville River delta. The information gained from this workshop provided the basis for the Yellow-billed Conservation Agreement that was signed by BLM along with Alaska Department of Fish and Game, Alaska Department of Natural Resources, North Slope Borough, Fish and Wildlife Service and National Park Service in 2006. The goal of the CA is to protect yellow-billed loon and their breeding, brood-rearing, and migrating habitats in Alaska, such that current or potential threats in these areas are avoided, eliminated or reduced to the degree that they do not cause the species to become threatened or endangered from these threats within the foreseeable future. This agreement has tenure of 10 years and in the agreement BLM pledged to uphold the specific habitat protection for nesting loons as provided by BMP E-11.

[Response to 43.013]
The BLM is aware that ABR prepared a manuscript addressing the question of loons nesting near infrastructure. CPAI, however, has not released it to be published. The BLM has used numerous publicly available studies completed by ABR relating to CPAI's Alpine field facilities.

[Response to 43.014]
The BLM, in consultation with the USFWS, has determined to delete E-17 from Alternatives B-1, B-2 (the preferred alternative), C, and D.

[Response to 43.015]
In the most recent biological opinion issued by the BLM for the NPR-A the USFWS prescribed Terms and Conditions that form the basis for required operating procedure E-18 and its analogous best management procedure provisions of the action alternatives. In order to be exempt from the prohibitions of Section 9 of the Endangered Species Act (ESA), BLM must comply with the terms and conditions provided in the Biological Opinion. Planning criteria listed in section 1.5.2 states that the plan will be consistent with the existing and any future biological opinions by the USFWS. The BLM is currently engaged in ESA consultation with USFWS and the terms and conditions of that document will supersede the 2008 consultation.

[Response to 43.016]
The BLM considers the language of the stipulation in the action alternatives, particularly its last sentence, to provide the flexibility urged in the comment.

[Response to 43.017]
The BLM has considered the lack of consistency in establishing setbacks from rivers. In the preferred alternative, measurements from the centerline have been abandoned in favor the

ordinary high watermark. Measurement from the ordinary high watermark is not considered to be more difficult than from the centerline.

[Response to 43.018]
Under Alternative A, required operating procedure K-4b applies to lands that could be leased under than alternative. Similarly, best management practice K-4b could be applied to lands available for leasing in Alternatives C and D. Language which may have been confusing has been deleted in the description of this measure.

[Response to 43.019]
The BLM considered the comment that evacuation of a road would be difficult once a large group of caribou have moved in, but determined to retain the language of the requirement/standard at K-5(e)(2) as is to provide better protection of caribou movement. It is anticipated that evacuation would be accomplished consistent with the requirement for temporary stoppages of vehicles alluded to in the comment.

[Response to 43.020]
The BLM considered changing the text of the requirement/standard of stipulation K-5a, but determined that it provides suitable flexibility. Depending upon the specific proposed development, ramps may be considered and required, but only after consideration of other options to meeting the objective to minimize disturbance and hindrance of caribou movement.

[Response to 43.021]
The BLM considered the comment regarding speed restrictions and a vehicle-use monitoring plan, but determined to retain the language of the requirement/standard at K-5a(e)(1) as is to provide better protection of caribou. Preventing vehicle/caribou collisions is only a small part of the reason for these mitigations; the primary purpose is reduction of caribou disturbance. Furthermore, these protective measures are part of a performance-based approach to stipulations and best management practices. If the Teshekpuk caribou acclimate to traffic at some time in the future, the BLM can loosen the restrictions, however, if there is no vehicle monitoring plan, the BLM would lack data on traffic, and therefore not know what levels of traffic cause what effects to caribou or how to better mitigate them.

[Response to 43.022]
The BLM assumes CPAI refers to best management practice K-5a and similar language in K-12. The BLM considered the comment that evacuation of a road would be difficult once a large group of caribou have moved in, but determined to retain the language as is to provide better protection of caribou movement. It is anticipated that evacuation would be accomplished consistent with the requirement for temporary stoppages of vehicles alluded to in the comment.

[Response to 43.023]
The BLM considered the comment that evacuation of a road would be difficult once a large group of caribou have moved in, but determined to retain the language of the requirement/standard at K-12(e)(2)(a) as is to provide better protection of caribou movement. It is anticipated that evacuation would be accomplished consistent with the requirement for temporary stoppages of vehicles alluded to in the comment.

[Response to 43.024]
NPRPA, as amended, contains special provisions that apply to any exploration or production activities within areas "designated by the Secretary of the Interior containing any significant subsistence, recreational, fish and wildlife, or historical or scenic value" (P.L. 96-514, 42 USC § 6504(a)). There is no requirement that special areas protect only species designated as threatened or endangered. The Colville River Special Area continues to provide valuable raptor habitat.

[Response to 43.025]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope.

However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea, though it is clear that infrastructure for Chukchi Sea development would be prohibited in lands in which new non-subsistence infrastructure would not be allowed. The IAP/EIS properly describes the development that may be associated with such infrastructure in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development" and appropriate analysis of associated cumulative impacts is provided in Chapter 4, Section title "Cumulative Effects on the Environment."

[Response to 43.026]
The BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort, although BLM did analyze alternatives that would protect a broad range and areas of land with wilderness characteristics. For a discussion of Wilderness Designation and BLM's decision not to designate Wild Lands, see Section 2.4.1 of the IAP/EIS - Alternatives Considered but Eliminated from Detailed Analysis.

[Response to 43.027]
The "southern area" of the NPR-A includes all or portions of several economic zones as established by the USGS. Economic zones 320 and 330 (see Chapter 4, Figure title "Federal subsurface economically recoverable undiscovered oil (at $180/barrel) and gas (at $8.67/thousand cubic feet) by USGS economic zone") are assigned no economic volumes of oil and gas.

The State of Alaska is currently evaluating construction of a road into the Umiat area which is located in Economic Zone 210. In the IAP/EIS this zone is assigned 78 million barrels of economic oil at $180/barrel and 1,945 billion cubic feet of economic natural gas at $8.67/thousand cubic feet.

[Response to 43.028]
The IAP/EIS is clear that the purpose of W&SR designation is to protect a river's free-flow, water quality, and outstandingly remarkable values. The preferred alternative (Alternative B-2) is an example of how this can be accomplished by decisions that do not include designation.

[Response to 43.029]
The purpose for the Teshekpuk Lake Special Area is found in section 2.1.2. The Teshekpuk Lake Special Area (TLSA) was designated primarily to protect important nesting, staging, and molting habitat for a large number of waterfowl. The area also provides important habitat for caribou and serves as an important area for subsistence resources and uses. Alternatives B-1, B-2, and C consider broadening the purpose of the TLSA to include the protection of important caribou habitat.

[Response to 43.030]
The language referred to in Alternative D also exists in all of the action alternatives. It is not a prohibition, but an assertion that temporary structures and access would not be prohibited by the respective alternatives. Note, however that Best Management Practice H-3 for Alternatives B-1,B-2, C, and D prohibits hunting and trapping by lessee's/permittee's employees, agents, and contractors when on work status.

[Response to 43.031]
The text has been changed and references the BLM Manual guidance on re-consideration of river segments when nonsuitability determinations were made in the earlier land use planning base, which would include current IAPs. (MS-6400 4.1.A, BLM, 2012)

[Response to 43.032]
Section 2.5 has been modified to reference the NSSI's website as a source for the large number of studies underway.

[Response to 43.033]
The assumption is a reasonable one and is consistent with assumptions made by the USGS in its analysis of economically recoverable oil and gas in NPR-A.

[Response to 43.034]
The many data sets that CPAI has provided on fish are already included in the Draft IAP/EIS. See Chapter 3, Fish, Fish Species. The discussion of fish species in the NPR-A incorporates numerous sources by reference, including 30 of 36 reports by MJM Research that are cited accurately in the Bibliography as being prepared for Phillips Alaska, Inc. or ConocoPhillips Alaska, Inc.

[Response to 43.035]
The relevance of ventilation and indoor air quality to respiratory disease outcomes is acknowledged in the public health discussions in the Affected Environment chapter (Chapter 3). The public health discussions do not assert that there are no air quality data for this area; and readers are referred to the air quality section (3.2.2.) of the report for discussion on air quality and modeling results.

[Response to 43.036]
The assumption in Chapter 4 has been modified to reflect the fact that although the IAP/EIS analysis projects up to 30 oil exploration wells and up to 98 gas exploration wells, two seismic surveys per year are anticipated in the NPR-A due to the number of surveys conducted to date.

[Response to 43.037]
The economic oil and gas analysis in Chapter 4, Section title "Oil and Gas Exploration and Development Activities" is based primarily on data contained in the USGS report titled "Economic Analysis of the 2010 U.S. Geological Survey Assessment of Undiscovered Oil and Gas in the NPR-A" by Emil D. Attanasi and Philip A. Freeman. In this economic assessment, the USGS assumed that each producing horizontal oil well would require a horizontal injection well.

[Response to 43.038]
The text has been modified to reflect the larger number of wells ConocoPhillips anticipates will ultimately be drilled on the three satellite pads.

[Response to 43.039]
This appears to be a question of terminology. In the context of this IAP/EIS, the BLM has not made a distinction between "exploration seismic activity" and "seismic data acquisition . . . to support development purposes once exploration is complete and prior to production"; both are considered to be exploration seismic surveying.

[Response to 43.040]
The sentence in the analysis of potential impacts on paleontological resources has been modified to indicate that seismic surveys normally precede exploratory drilling.

[Response to 43.041]
The analysis of these impacts is based primarily on experience from the existing North Slope oil fields. The BLM recognizes that mitigations are applied in that area, and that they minimize rather than eliminate these impacts. These and other mitigations are included as stipulations or best management practices in the IAP/EIS. Since there are residual impacts despite the mitigations, however, those impacts are analyzed in the IAP/EIS.

[Response to 43.042]
The statement in the IAP/EIS says that “investigations to identify gravel sources in the NPR-A have not been conducted for undiscovered oil and gas.” The Clover Mine Site was found during a

phase of exploratory drilling for oil that resulted in discoveries. The text in the IAP/EIS has been revised to make this clarification.

[Response to 43.043]
The proposed mitigation does not specify vehicles related to oil and gas activities. Rather, it states "all equipment and vehicles," meaning any vehicles associated with any activity that requires a permit from the BLM.

[Response to 43.044]
These activities were included in the analyses for each alternative, but were not summarized in the "conclusion" sections. The text of the IAP/EIS has been revised to do so.

[Response to 43.045]
The language of Potential Mitigation Measure 5 in Chapter 4 (Environmental Consequences), Alternative A, Special Status Species of Marine Mammals, Potential New Mitigation Measures was modified to retain the original intent of the measure, while removing the requirement for a CAA and expanding the measure to include other marine mammal subsistence species potentially affected by barging activity.
Under the revised mitigation measure, barge operators would be required to demonstrate that barge activities will not have unmitigable adverse impacts on the availability of marine mammals for subsistence uses; the means through which this is achieved is no longer specified.

[Response to 43.046]
Consistent with guidance from the Council on Environmental Quality, the IAP/EIS considers mitigation measures that are outside BLM's jurisdiction. The text of the potential mitigation measure has been modified to better reflect the scope of BLM's mission as a land management agency and to remove the implication that BLM would be the agency that would oversee the implementation of the mitigation measure.
All elements of the potential new mitigation measure address predicted impacts of development that are described in the alternative analysis for the NPR-A, have been observed in multiple locations associated with resource development, and are increasingly becoming industry standard practice (see for example Vohra S., Birley M., Ball J. (2010). Good Practice Guidance on Health Impact Assessment. London: International Council on Mining and Metals.)

[Response to 43.047]
Consistent with guidance from the Council on Environmental Quality, the IAP/EIS considers mitigation measures that are outside BLM's jurisdiction. The text of the potential mitigation measure has been modified to better reflect the scope of BLM's mission as a land management agency and to remove the implication that BLM would be the agency that would oversee the implementation of the mitigation measure.

[Response to 43.048]
Consistent with guidance from the Council on Environmental Quality, the IAP/EIS considers mitigation measures that are outside BLM's jurisdiction. The text of the potential mitigation measure has been modified to better reflect the scope of BLM's mission as a land management agency and to remove the implication that BLM would be the agency that would oversee the implementation of the mitigation measure.

[Response to 43.049]
The text of the potential mitigation measure has been revised to remove "needs."

[Response to 43.050]
The wording has been changed in the text to increase clarity.

[Response to 43.051]
The wording has been changed in the text to increase clarity.

[Response to 43.052]
The text has been edited to improve clarity around the definitions of village leadership and proximity.

[Response to 43.053]
Consistent with guidance from the Council on Environmental Quality, the IAP/EIS considers mitigation measures that are outside BLM's jurisdiction. Parties other than BLM would initiate this mitigation; the BLM is not suggesting by including this potential mitigation measure in the analysis that it would require such an action by other parties.

[Response to 43.054]
The original text did not state that oil and gas exploration/development have been correlated with the loss of sea ice, but the text has been modified for clarity.

[Response to 43.055]
The quoted statement was meant to convey that the majority of none of these four herds has been exposed to oil and gas activities during all seasons of the year, and in this case winter especially. The Colville River delta and surrounding area, mentioned in this comment, are on the periphery of the Teshekpuk Caribou Herd range in all seasons, and few animals of this herd encounter those facilities. The BLM stands by this statement as correct, and has revised it in the Final IAP/EIS to further clarify what was meant. The discussion of increased winter mortality itself or reduced calf productivity was not stated or intended as an "assumption" of truth. Rather, it was presented as an empirically supported possibility (i.e. IF caribou expend too much energy during winter, they may fail to calve in the spring or may even starve to death before the winter ends).

[Response to 43.056]
A discussion of BLM's rationale for not analyzing the development of unconventional oil and gas development from source rocks in NPR-A is provided in section 4.2.1.2 in the assumptions for resource potential and petroleum-related activities.

[Response to 43.057]
The statements are not inconsistent. The potential factors that could affect terrestrial mammals are onshore oil and gas exploration and development activities, non-oil and gas-related overland moves and development, scientific data gathering, recreation, subsistence and sport hunting, and effects to animals on migratory routes or wintering areas where impacts could be independent of activities on the North Slope. It is not possible to ascribe a population fluctuation to any specific stressor, though among these factors, oil and gas development activities west of the Arctic National Wildlife Refuge are the most likely contributors to cumulative impacts.

[Response to 43.058]
The suggested wording has been adopted.

COMMUNICATION NUMBER 44
David Holt, President
Consumer Energy Alliance

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June 14, 2012
NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99501

RE: Comments on the Draft Integrated Activity Plan/Environmental Impact Statement for the National Petroleum Reserve - Alaska (NPR-A)
Dear Mr. Cribley:

On behalf of Consumer Energy Alliance (CEA) and CEA - Alaska, we are writing the U.S. Bureau of land Management (BLM) to strongly urge the agency to move forward with Alternative D for the Final Integrated Activity Plan/Environmental Impact Statement for the National Petroleum Reserve-Alaska (NPR-A). CEA believes that Alternative D is the only acceptable alternative given the intent of the Reserve, the best interest of the citizens of the State of Alaska, and the best interest of the citizens of the United States of America.

CEA is a non-profit, non-partisan organization committed to working with elected leaders, affected stakeholders and consumers to help create sound energy policy and maintain stable energy prices. As part of a balanced energy policy, CEA advocates for expanded domestic production and use of all energy resources as a means to provide price stability for consumers. CEA has more than 190 affiliated organizations, including energy suppliers and 'producers, manufacturers, farmers, small businesses and truckers as well as over 450,000 individual consumer-advocates. CEA-Alaska is the Alaska state chapter of the organization.

[44.001] In choosing Alternative D, the BLM will uphold the Reserve's intent as a petroleum reserve, as stipulated by law under the 1976 Naval Petroleum Reserves Production Act. Therefore, the federal government should manage the reserve in a manner that facilities oil and gas development. In expanding areas for designation as special areas or wild and scenic rivers, the BLM is refocusing the intent of the reserve for conservation purposes. Significant portions of the State of Alaska have already been designated for conservation, and many of Alaska's citizens contend that current conservation efforts are sufficient. **[44.002]** The State of Alaska depends significantly on the development of its natural resources for revenue and economic growth. Further attempts to curb its ability to produce these natural resources could severely harm the future economic well being of the state.

Ed Fogels, Deputy Commissioner for the Alaska Department of Natural Resources, testified at the Anchorage hearing in favor of resource development in this area and in favor of the United States honoring the promises contained in the Statehood Compact and Alaska National Interest lands Conservation Act to the people of Alaska to allow resource development to help the peoples of Alaska. The state wants maximum responsible development from this area. The nation needs maximum responsible development from this area. Alternative D is the only alternative that meets these criteria.

While CEA understands that the other alternatives offered would nominally allow for limited oil and gas leasing in suboptimal areas, CEA remains concerned of the impact that expanded

special areas will have for the development of onshore infrastructure. Expanded infrastructure onshore - additional roads, pipelines, and terminal facilities - will be necessary not only to support leasing in the NPR-A, but also to transport oil produced from the Chukchi Sea to the Trans-Alaskan Pipeline. In the draft plan, the BLM states that all of the alternatives intend to "provide an opportunity, subject to appropriate conditions, to construct necessary onshore infrastructure to transport oil and gas from the Chukchi Sea." However, expanded special areas will undoubtedly affect the economics and timeline for construction and operation of a 400-mile pipeline that will be necessary to transport the oil. In order to better ensure this pipeline can be constructed in proper time, we believe Alternative D is the only acceptable option.

As the draft states, the Chukchi Sea is one of the most promising energy basins in the United States. Energy development in the Beaufort and Chukchi Seas has tremendous potential to bolster U.S. energy security and grow the economy. With a conservative estimate of 27 billion barrels of oil and 132 trillion cubic feet of gas, Alaska offshore resources must playa role in a balanced energy policy that prioritizes domestic resources. The Trans-Alaska Pipeline - one of the most critical energy infrastructures in the United States - is averaging only 580,000 barrels of oil throughput a day, down from a high of nearly 2 million barrels a day in 1988. Without a significant source of new oil coming online, low throughput could force the pipeline to close in the coming decade, leaving millions of U.S. consumers, mostly on the West Coast, without a stable supply of domestically produced oil. Accessing new supplies in the NPR-A and connecting Chukchi production to the TAPS via the NPR-A will allow the United States to better meet its energy needs through domestic production. If leasing and the development of a pipeline are prohibited, oil from the Chukchi will likely be exported to other markets.

Alaska and the lower-48 will fail to realize the benefits of expanded energy development in Alaska if the NPR-A is not managed in a manner that is consistent with its intent. CEA supports Alternative D because it provides for full leasing and for the efficient, legally defensible construction and operation of a pipeline in the NPR-A as well as access to other resources in the area. If the federal government permits the development of these new sources of oil, American energy consumers will benefit from a secure supply of domestic energy.

We appreciate the opportunity to comment, and we look forward to reading the BLM's final plan adopting Alternative D.

Sincerely,
David Holt
President
Consumer Energy Alliance
Steve Pratt
Executive Director
CEA-Alaska

[Response to 44.001]
The IAP/EIS properly acknowledges and fulfills the BLM's responsibility for management of NPR-A. For a discussion of BLM's responsibilities consistent with law, see particularly sections 1.1 and 1.5.

[Response to 44.002]
The analysis included in the document provides an estimate of the magnitude of the future economic effects under the various alternatives in the scenario developed for this impact statement. It is true that reductions in resource availability will limit future economic wellbeing of the state, however state economic wellbeing is only one of many considerations in determining the best management alternative for a block of Federal land. All alternatives include some level of potential resource development.

COMMUNICATION NUMBER 45
Corri Feige, General Manager
Linc Energy

June 15, 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

Bud Cribley
Alaska State Director
Bureau of Land Management
222 W. 7th Avenue, #13
Anchorage, AK 99513-5421

Dear Mr. Cribley:

Linc Energy Operations, Inc. ("Linc Energy"), the designated operator for Linc Alaska Resources, LLC (f/k/a Renaissance Alaska, LLC), appreciates this opportunity to provide written comments regarding the National Petroleum Reserve-Alaska ("NPR-A") Draft Integrated Activity Plan/Environmental Impact Statement ("IAP/EIS"). Linc Alaska Resources, LLC is the managing member of Renaissance Umiat, LLC, a leaseholder that has two NPR-A and two State of Alaska leases on the southeastern boundary of the NPR-A at Umiat. Linc Energy would like to commend the BLM on its efforts in preparing the IAP/EIS and appreciates the time and effort involved in accumulating, evaluating and preparing the vast amount of reference and resource material used to prepare the five volume IAP/EIS.

As you know, the Umiat oil field, which Linc Energy is in the process of advancing toward development, was first discovered in the 1940's by the US Navy and was one of the earliest known exploration ventures within what was then known as the Naval Petroleum Reserve #4 (or "PET 4" by those explorers and pilots who knew it well). As the IAP/EIS acknowledges, the NPR-A was designated a petroleum reserve when it was created in 1923 by President Warren G. Harding and has retained the designation as a national, strategic petroleum reserve to this day. Under the provisions of the Naval Petroleum Reserves Production Act of 1976 ("NPRPA"), the Secretary of the Interior is required to conduct oil and gas leasing and provide for the oil and gas development within the NPR-A. While the Secretary is also required to manage all activities within the petroleum reserve and promulgate regulations that appropriately protect the "environment, fish and wildlife, historical and scenic values", this does not mean that these values are to be protected at the expense of oil and gas development. The NPRPA stipulates that these values are not to compete with oil and gas development, but are to be protected in an appropriate manner in conjunction with oil and gas development. Linc Energy strongly believes that any management plan and management activity must take a position of balance, which not only supports environmental protections but also encourages oil and gas exploration and development for the national defense and strategic advantage of the United States.

Chapter One of the draft IAP/EIS accurately states the Congressional mandate that the BLM must ensure timely and responsible development of the NPR-A's oil and gas resources for our nation. In addition to heeding this directive from Congress, the alternatives discussed in the IAP/EIS must also seek to accommodate President Obama's recent pronouncements related to his support for responsible energy development in the Alaska Arctic. Indeed, the President has issued three Executive Orders ("Eos") that encourage energy development and that direct federal agencies to improve their permitting processes. The objective of these EOs is to promote economic growth, domestic energy production, and job creation.

More specifically, on May 14, 2011, President Obama announced that his administration would increase safe and responsible domestic oil development. To do this, he directed the Department of the Interior (the "DOI") to conduct annual lease sales in the NPR-A and he announced a plan to "streamline" the permitting process in Alaska by "establishing a new team to coordinate work on Alaska drilling permits." After holding the first NPR-A lease sale in years, the DOI issued a press release on December 7, 2011, celebrating the success of the lease sale. The DOI's press release stated that: "Today's lease sale comes in response to the President's announcement, which emphasized the need to protect sensitive areas while providing development opportunities." Secretary of the Interior Ken Salazar, in the same press release, observed: "As industry begins to build infrastructure and explore and develop oil and gas in this area of the North Slope of Alaska, we expect to harness the energy and economic benefits of the NPR-A for our nation. In support of the President's energy priorities, this lease sale in the NPR-A is an important part of our efforts to develop domestic resources on public lands safely and responsibly." Likewise Deputy Secretary David Hayes also expressed his support for energy development in the NPR-A. He is quoted in the press release as saying: "As stewards of the natural resources on Alaska's public lands, we must continue to facilitate safe and responsible development and find ways to expand opportunities to explore, develop and deliver energy resources from the NPR-A."

In addition to these announcements supporting responsible energy development in Arctic Alaska, President Obama issued three EOs directing agencies to make the federal permitting process related to energy and infrastructure projects more efficient, timely, and certain.

For example, on January 18, 2011, President Obama issued Executive Order 13563, Improving Regulation and Regulatory Review. This EO is designed to improve the regulatory review process and states that: "Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation . . . . It must promote predictability and reduce uncertainty." (emphasis added). To accomplish this goal, President Obama directed agencies to "select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; disruptive impacts; and equity)[.]"

Similarly, on July 12, 2011, President Obama issued Executive Order 13580, Interagency Working Group on Coordination of Domestic Energy Development in Alaska. This EO established "an interagency working group to coordinate the efforts of Federal agencies responsible for overseeing the safe and responsible development of onshore and offshore energy resources and associated infrastructure in Alaska and to help reduce our dependence on foreign oil[.]" The primary purpose of the working group is to "facilitate coordinated and efficient domestic energy development and permitting in Alaska while ensuring that all applicable standards are fully met." For our purposes, the working group was specifically tasked by the President with two critical functions: (i) to "facilitate orderly and efficient decision-making regarding the issuance of permits and conduct of environmental reviews for onshore and offshore energy projects in Alaska" and (ii) to "engage in long term planning" to "ensure . . . the development of necessary infrastructure to adequately support energy development in Alaska" (emphasis added).

Finally, on March 22, 2012, President Obama issued Executive Order 13604, Improving Performance of Federal Permitting and Review of Infrastructure Projects. The purpose of EO 13604 is "to significantly reduce the aggregate time required to make decisions in the permitting and review of infrastructure projects by the Federal Government, while improving environmental and community outcomes." (emphasis added). This EO explains that permitting reform is necessary to strengthen the nation's economy. The President stated: "To maintain our Nation's competitive edge and ensure an economy built to last, the United States must have fast, reliable, resilient, and environmentally sound means of moving people, goods, energy, and information." In furtherance of this goal, the President directed federal agencies to provide a

"transparent, consistent, and predictable path for both project sponsors and affected communities." He wrote:

Reviews and approvals of infrastructure projects can be delayed due to many factors beyond the control of the Federal Government, such as poor project design, incomplete applications, uncertain funding, or multiple reviews and approvals by State, local, tribal, or other jurisdictions. Given these factors, it is critical that executive departments and agencies (agencies) take all steps within their authority, consistent with available resources, to execute Federal permitting and review processes with maximum efficiency and effectiveness, ensuring the health, safety, and security of communities and the environment while supporting vital economic growth. . . . To achieve that objective, our Federal permitting and review processes . . .must ensure that agencies set and adhere to timelines and schedules for completion of reviews, set clear permit-ting performance goals, and track progress against those goals. . . . They must recognize the critical role project sponsors play in assuring the timely and cost-effective review of projects by providing complete information and analysis and by supporting, as appropriate, the costs associated with review.

These EOs, coupled with the President's and Secretary's specific desire to see timely and responsible energy development from the NPR-A and Alaska Arctic, suggest that the draft IAP/EIS must, at the very least, ensure that planning decisions made by the BLM do not stymie, undermine, or unduly delay any phase of energy projects in Arctic Alaska.

Consequently, of the four alternative approaches from the planning effort the IAP/EIS presents, Linc Energy believes that the BLM should adopt Alternative D as its Preferred Alternative. Alternative D will open all of NPR-A's subsurface to oil and gas leasing, with mitigation measures (such as the lease mitigation measures currently in place) to protect surface resources, but which do not block development of onshore energy deposits or infrastructure, including that infrastructure necessary to transport oil and gas from the Chukchi Sea to the Trans-Alaska Pipeline System ("TAPS"). Alternative D is the only alternative that meets the original purpose and intent of the NPR-A and the only alternative to support the continued development of these lands in the best interest of the people of the United States.

Although the IAP/EIS acknowledges that land management practices in the NPR-A should provide for necessary pipelines and other infrastructure to carry offshore resources to the TAPS, each of the proposed alternatives include significant restrictions that could inhibit or even preclude permitting and construction of pipelines across the reserve. Without provisions in a management plan that specifically provide for a process to identify and permit a transportation corridor that would contain pipelines and roads, the hydrocarbons discovered in the NPR-A, such as those at Umiat will be stranded and the original purpose and intent of the NPR-A will be thwarted. The IAP/EIS must address clear and specific provisions for onshore infrastructure to transport production from currently identified onshore oil fields, such as the one at Umiat, and future offshore oil and gas resources, across the NPR-A.

[45.001] In addition to establishing a process for identifying and permitting transportation corridors, the environmental impact analysis in Chapter 4 of the IAP/EIS should be revisited and updated to consider the multiple hypothetical corridor alternatives for a pipeline transporting oil and gas across the NPR-A from possible development projects located on state and federal lands (both onshore and offshore) lying west of the Colville River to the TAPS, as well as the environmental impacts associated with that pipeline and all the related infrastructure, including the construction and maintenance of such a pipeline and related infrastructure. This analysis should be conducted for each of the hypothetical pipeline corridor alternatives. Further, the cumulative effects section in the IAP/EIS (Section 4.7) should be reconsidered and updated to fully discuss this proposed pipeline activity, any additional reasonably foreseeable future oil and gas activities that may occur as a result of this pipeline, and other issues not adequately considered in the cumulative impacts section of the current draft.

Establishing designated road and pipeline corridors within the NPR-A is a critical component of energy and mineral development in the NPR-A and would also mitigate potential surface disturbance and environmental impact. Providing provisions that ensure onshore infrastructure to transport oil and gas through the NPR-A would benefit both the national and state economies by enhancing our national energy security, as well as increasing revenues and employment. Surface protection measures, Special Area designations, and other restrictions must not prevent the transport of Chukchi oil and gas resources to market. Establishing a designated transportation corridor through the NPR-A to the TAPS for new oil and gas production from the NPR-A, that would also allow access for Chukchi Sea production, would revitalize North Slope production and the TAPS through-put, which has fallen from a peak of over 2 million barrels per day to under 600,000 barrels per day.

[45.002] The alternatives offered in the IAP/EIS appear to refocus land management in the NPR-A from multiple use to conservation, which is inconsistent with the primary purpose of the petroleum reserve. This is unacceptable for an area intended and set aside for oil and gas development.
For the BLM to suggest that "pressure", either from oil and gas development or the placement of permanent facilities, is so great that the special protections and additional withdrawal of acreage outlined in Alternatives B and C are required is clearly counter to the original intent of the NPR-A designation and seems to demonstrate a lack of understanding of the actual "ground-truth" conditions within the NPR-A. Further, assumptions and conclusions in Chapter 4 of the IAP/EIS regarding future **[45.003]** cumulative effects of activities associated with oil and gas exploration and development on subsistence appear to ignore the fact that caribou populations on the North Slope have increased since the development of Prudhoe Bay and other oil and gas fields on the North Slope and ignore any of the positive impacts the roads and other infrastructure have had on caribou and other wildlife populations. Consequently, the conclusions of the IAP/EIS that Alternative D would negatively impact subsistence hunting are flawed.

Industry's track record on the North Slope and the technological advances of the past decade, have greatly reduced the surface footprint of development such that full leasing of the subsurface oil and gas resources within the NPR-A can be conducted utilizing appropriate lease development plans in such a way that will both conserve and protect the environment, fish and wildlife, historical and scenic values, and allow for exploration and development activities. As the IAP/EIS correctly points out, there has only been one significant onshore oil spill (exceeding 120,000 barrels) in the United States since 1910 and none in Alaska, which underscores the industry's safety record and emphasizes the extremely low possibility of an incident occurring within the NPR-A which would damage the surface environment within the NPR-A. This safety record advocates against the establishment of large Special Areas, which have associated stipulations, ROPs, and BMPs, that could prevent the construction of a pipeline, and also does not support the expansion of existing Special Areas within the NPR-A which are significantly increased in Alternatives B and C. Alternatives B and C would result in up to 67 percent of the entire NPR-A being in Special Area status which is unacceptable for an area dedicated for the development of oil and gas resources. The BLM should not consider expansion of current, nor creation of new, Special Areas. Further, **[45.004]** Alternatives B and C include the recommendation of 12 rivers as Wild Rivers and 3 rivers as Scenic Rivers, respectively. These rivers largely flow from the south to the north. Consequently, any restrictions on pipeline construction across these rivers could impede the ability to construct pipelines to transport oil and gas to TAPS and a future gas pipeline. Such designations are not in accordance with the purpose of the NPR-A.

It should be noted that, despite frequent requests by the oil and gas industry, very little of the NPR-A containing the highest geological prospectivity has been opened for resource evaluation. Out of the 630 tracts being considered for the 2012 lease sale, only 24 lie within, or close to, the Barrow Arch structural feature, the area where most of the significant oil and gas discoveries on the North Slope and all of the North Slope production to date are associated. Making available

up to 7.1 million acres in the NPR-A to oil and gas lease sales may sound generous on paper but in reality it includes

If the BLM will not consider adopting Alternative D as the Preferred Alternative, then Linc Energy would recommend Alternative A as a second choice of the alternatives. Alternative A is the "No-Action Alternative" and allows for the continued protection of existing Special Areas through the use of management plans and stipulations on permanent development. This alternative also allows for continued oil and gas leasing, exploration and development of a portion of the NPR-A. The existing regulations and stipulations are stringent and set a high bar for any company seeking to undertake exploration and development within the NPR-A, and they provide all necessary protections for the environment, fish and wildlife, historical and scenic values. For example, one of the most stringent required operating procedures attached to our Renaissance Umiat, LLC leases in the NPR-A is numbered: "A-11: Ensure Permitted Activities Do Not Create Human Health Risks Through Contamination of Subsistence Foods". This procedure requires that the lessee gather data and define the baseline levels of contaminants in locally-used food before development. This must be done as soon as the lessee proposes permanent oil and gas development and is to continue throughout the life of production. Even if Alternative A is the preferred Alternative, it should nonetheless allow for review and modification of existing required operating procedures and lease stipulations to make them more easily amendable when changing circumstances are shown to exist or acceptable mitigation measures are available. For example, **[45.005]** the setbacks along Colville River Special Use Area were initially established in large measure to protect peregrine falcon nesting areas when the peregrine falcon was listed as an endangered species. Now that the peregrine falcon is no longer listed as an endangered species, coupled with the fact that nesting areas change from year to year, these setbacks along the Colville River should be allowed to be modified in specific locations when it is shown that there are no peregrine falcon nesting sites within proposed oil and gas development or exploration areas. Further, consideration of the establishment of Special Use Areas, required operating procedures and lease stipulations based on climate change data should be strictly scrutinized to ensure that the climate data utilized was peer reviewed since some of the studies have been undertaken by entities that have a bias against development in general.

Linc Energy respectfully advises that the BLM refrain from designating highly-restrictive conservation units in the NPR-A, given the nation's growing need for US-produced energy and minerals. Alaska already has an overwhelming majority of the nation's public lands closed to development. Therefore, Linc Energy is opposed to any consideration of either Alternative B or Alternative C since both place a greater emphasis on the protection of surface values and provide for setting aside lands from leasing and development, and completely ignore the stated purpose and intent of establishing the NPR-A. Both of these alternatives serve to convert the NPR-A into a de facto wildlife refuge or wilderness area and do not meet the purpose and intent of the NPR-A as established in the NPRPA. Enlargement of Special Areas, as described in Alternative B, could significantly impact onshore development from existing NPR-A oil and gas leases, such as those at the Umiat oil field, and restrict or prohibit infrastructure necessary to transport both new onshore and offshore oil and gas resources to market in an economic and efficient manner. Further, such distinctions may make it more difficult to effectuate responsible management of the surface resources throughout the NPR-A.

Allowing access to the entire NPR-A may also allow collaboration between the BLM and oil and gas exploration and development companies to properly plug and abandon the so-called legacy wells. There are over 100 inactive oil and gas wells that were drilled in the NPR-A decades ago by the U.S. Navy and Husky Oil Company (through the coordination of the USGS), prior to transferring management of the NPR-A to the BLM, that have never been properly plugged according to Alaska Oil & Gas Conservation Commission ("AOGCC") standards. In addition there are contaminated solid waste sites from "Former Used Defense Sites" and Air Force installations authorized under rights of way, staging areas and other sites. Under the BLM's "Strategic Plan for Legacy Wells", these wells are being plugged at a rate of only a few per year.

Any discussion about preserving the surface resources in the NPR-A should begin with a discussion of a plan to properly plug and abandon the legacy wells and remediate the contaminated solid waste sites. Allowing surface access to private oil and gas companies throughout the NPR-A would provide a mechanism whereby the necessary equipment and personnel could be made available through a collaborative agreement with these companies and the BLM to get this necessary work done in an expeditious manner.

In conclusion, Linc Energy urges the BLM planners to focus on the fiduciary responsibility which the Secretary of the Interior and the BLM have to the people of the United States to incentivize the exploration and development of the NPR-A for national strategic benefit. Any proposal or alternative that would effectively conserve the entire NPR-A, or any portion thereof, as a National "Pleistocene" Refuge, with no future oil and gas leasing should be rejected. As previously discussed, Linc Energy believes that the goal of balanced protections and development must be allowed to occur within the NPR-A. Management of the NPR-A should reflect the priority of both these activities, as was conceived with its original designation as a petroleum reserve, and Linc Energy believes that will be the case if the BLM endorses Alternative D as the preferred Alternative.

Respectfully submitted,
LINC ENERGY OPERATIONS, INC.
Corri Feige
General Manager

[Response to 45.001]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope.

However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. It properly describes the development that may be associated with such infrastructure in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development" and appropriate analysis of associated cumulative impacts is provided in Chapter 4, Section title "Cumulative Effects on the Environment."

[Response to 45.002]
The IAP/EIS properly acknowledges and fulfills the BLM's responsibility for management of NPR-A. For a discussion of BLM's responsibilities consistent with law, see particularly sections 1.1 and 1.5.

[Response to 45.003]
The conclusion is not based on assumptions regarding caribou populations. It is based on the fact that subsistence hunters avoid areas around infrastructure. Please refer to Section 3.4.3.4, Subsistence User Avoidance of Developed Areas and Chapter 4, Environmental Consequences, Cumulative Effects, Subsistence, Future Effects and Their Accumulation, Oil and Gas Exploration and Development Activities.

In the conclusion to the Cumulative Effects, Subsistence Section, there are additional descriptions of how future development will exacerbate the avoidance effect. Similary descriptions can be found in the ANILCA 810 evaluations of Alternative D and the Cumulative Case and in the analysis of the preferred alternative.

[Response to 45.004]
The text for the Wild and Scenic River sections of Chapter 4 relevant to Alternatives B-1 and C was changed to more clearly describe the potential impacts of designation on a potential pipeline.

[Response to 45.005]
NPRPA, as amended, contains special provisions that apply to any exploration or production activities within areas "designated by the Secretary of the Interior containing any significant subsistence, recreational, fish and wildlife, or historical or scenic value" (P.L. 96-514, 42 USC § 6504(a)). There is no requirement that special areas protect only species designated as threatened or endangered. The Colville River Special Area continues to provide valuable raptor habitat.

COMMUNICATION NUMBER 46
Paul Devine, Chief Financial Officer
Nordaq Energy

June 15, 2012

Bud Cribley
Alaska State Director
Bureau of Land Management
222 W 7th Avenue, #13
Anchorage, AK 99513-5421

Subject: Nordaq Energy Comments on BLM Draft Integrated Activity Plan / Environmental Impact Statement for the National Petroleum Reserve – Alaska

Dear Sirs:

Nordaq Energy Inc. (Nordaq) has conducted a review of the Draft Integrated Activity Plan and Environmental Impact Statement (Draft IAP/EIS), which the Bureau of Land Management (BLM) has prepared in an effort to determine future land management practices in the National Petroleum Reserve Alaska (NPR-A). Please carefully consider the following comments as, in our view, significant revisions are required before the agency works to develop a final document.

Nordaq's Interest and Summary of Concerns

Nordaq was the highest bidder on 11 tracts in the State of Alaska's December 7, 2011 Beaufort Sea lease sale. These leases are located in Smith Bay, which lies in state waters directly adjacent to the National Petroleum Reserve-Alaska (NPR-A). To acquire these leases, Nordaq spent over $1.35 million. In the future, Nordaq anticipates adding to its land position on the North Slope of Alaska, generally, and in the NPRA, specifically.

Nordaq supports an Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) that includes balanced surface protections, fosters responsible energy development, and provides practicable, and economically feasible, corridors that will enable the construction of infrastructure to transport hydrocarbons. If Nordaq makes a commercial discovery, it is keenly interested in ensuring that it will have the opportunity to safely and responsibly transport hydrocarbons to market. Thus, Nordaq endorses the BLM's stated intent to ensure that "the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct necessary onshore infrastructure, primarily pipelines and roads, to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope."

Unfortunately, **[46.001]** the draft IAP/EIS provides little detail related to how BLM's land management practices in the NPR-A will enable companies to construct the necessary infrastructure to transport hydrocarbons to the Trans-Alaska Pipeline System (TAPS). Worse, each of the proposed Alternatives have significant restrictions in the form of Special Areas, Wild and Scenic Rivers, stipulations, required operating procedures (ROPs), and best management practices (BMPs), that could profoundly and irreparably impact the ability of leaseholders to permit and construct the necessary infrastructure to transport hydrocarbons across the NPR-A and into TAPS.

Nordaq's fear is the absence of clear and affirmative statements authorizing a pipeline corridor and the construction of a transportation infrastructure that connects to TAPS will prevent or delay the development of Alaska's Arctic energy resources because the lack of clarity on this issue will increase the likelihood of regulatory confusion, which in turn will create uncertainty regarding the ability of companies to develop and transport energy resources and spawn costly litigation.

President Obama's Pronouncements Supporting Timely and Responsible Energy Development in the NPR-A

Chapter One of the draft IAP/EIS accurately states the Congressional mandate that the BLM must ensure timely and responsible development of the NPR-A's oil and gas resources for our nation. In addition to heeding this directive from Congress, the Alternatives discussed in the IAP/EIS must also seek to accommodate President Obama's recent pronouncements related to his support for responsible energy development in the Alaska Arctic. Indeed, the President has issued three Executive Orders (EO) that encourage energy development and that direct federal agencies to improve their permitting processes. The objective of these EOs is to promote economic growth, domestic energy production, and job creation.

More specifically, on May 14, 2011, President Obama announced that his administration would increase safe and responsible domestic oil development. To do this, he directed the Department of the Interior to conduct annual lease sales in the NPR-A and he announced a plan to "streamline" the permitting process in Alaska by "establishing a new team to coordinate work on Alaska drilling permits." After holding the first NPR-A lease sale in years, the Department of the Interior (DOI) issued a press release on December 7, 2011, celebrating the success of the lease sale. DOI's press release stated that "Today's lease sale comes in response to the President's announcement, which emphasized the need to protect sensitive areas while providing development opportunities." Secretary of the Interior Ken Salazar, in the same press release, observed: "As industry begins to build infrastructure and explore and develop oil and gas in this area of the North Slope of Alaska, we expect to harness the energy and economic benefits of the NPR-A for our nation. In support of the President's energy priorities, this lease sale in the NPR-A is an important part of our efforts to develop domestic resources on public lands safely and responsibly." Likewise Deputy Secretary David Hayes also expressed his support for energy development in the NPR-A. He is quoted in the press release as saying "As stewards of the natural resources on Alaska's public lands, we must continue to facilitate safe and responsible development and find ways to expand opportunities to explore, develop and deliver energy resources from the NPR-A,"

In addition to these announcements supporting responsible energy development in Arctic Alaska, President Obama issued three Executive Orders directing agencies to make the federal permitting process related to energy and infrastructure projects more efficient, timely, and certain.

For example, on January 18, 2011, President Obama issued Executive Order 13563, Improving Regulation and Regulatory Review. This EO is designed to improve the regulatory review process and states that "Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation . . . . It must promote predictability and reduce uncertainty." (emphasis added). To accomplish this goal, President Obama directed agencies to "select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; disruptive impacts; and equity)[.]"

Similarly, on July 12, 2011, President Obama issued Executive Order 13580, Interagency Working Group on Coordination of Domestic Energy Development in Alaska. This EO established "an interagency working group to coordinate the efforts of Federal agencies responsible for overseeing the safe and responsible development of onshore and offshore energy resources and associated infrastructure in Alaska and to help reduce our dependence on foreign oil[.]" The primary purpose of the working group is to "facilitate coordinated and efficient domestic energy development and permitting in Alaska while ensuring that all applicable standards are fully met." For our purposes, the working group was specifically tasked by the President with two critical functions: (i) to "facilitate orderly and efficient decision-making regarding the issuance of permits and conduct of environmental reviews for onshore and offshore energy projects in Alaska" and (ii) to "engage in long term planning" to "ensure . . . the

development of necessary infrastructure to adequately support energy development in Alaska" (emphasis added).

Finally, on March 22, 2012, President Obama issued Executive Order 13604, Improving Performance of Federal Permitting and Review of Infrastructure Projects. The purpose of EO 13604 is "to significantly reduce the aggregate time required to make decisions in the permitting and review of infrastructure projects by the Federal Government, while improving environmental and community outcomes." (emphasis added). This EO explains that permitting reform is necessary to strengthen the nation's economy. The President stated: "To maintain our Nation's competitive edge and ensure an economy built to last, the United States must have fast, reliable, resilient, and environmentally sound means of moving people, goods, energy, and information." In furtherance of this goal, the President directed federal agencies to provide a "transparent, consistent, and predictable path for both project sponsors and affected communities." He wrote:

Reviews and approvals of infrastructure projects can be delayed due to many factors beyond the control of the Federal Government, such as poor project design, incomplete applications, uncertain funding, or multiple reviews and approvals by State, local, tribal, or other jurisdictions. Given these factors, it is critical that executive departments and agencies (agencies) take all steps within their authority, consistent with available resources, to execute Federal permitting and review processes with maximum efficiency and effectiveness, ensuring the health, safety, and security of communities and the environment while supporting vital economic growth. . . . To achieve that objective, our Federal permitting and review processes . . . must ensure that agencies set and adhere to timelines and schedules for completion of reviews, set clear permitting performance goals, and track progress against those goals. . . . They must recognize the critical role project sponsors play in assuring the timely and cost-effective review of projects by providing complete information and analysis and by supporting, as appropriate, the costs associated with review.

The BLM Must Strive to Ensure Companies can Transport Hydrocarbon Resources to TAPS in an Efficient and Economical Manner

These EOs, coupled with the President's and Secretary's specific desire to see timely and responsible energy development from the NPR-A and Alaska Arctic, suggest that the draft IAP/EIS must, at the very least, ensure that planning decisions made by the BLM do not stymie, undermine, or unduly delay any phase of energy projects in Arctic Alaska. Yet the Alternatives discussed in the draft IAP/EIS suggest that the BLM is, unfortunately, entertaining land management practices that will have this result.

the opportunity to construct the necessary infrastructure to bring oil and gas resources to market, all four Alternatives contain language indicating that such infrastructure would be prohibited over large swaths of land. Indeed, all four Alternatives include the maintenance and management of large Special Areas, which have associated stipulations, ROPs, and BMPs, that could prevent the construction of transportation infrastructure. For example, the acreage of Special Areas within the NPR-A is significantly increased in Alternative B and C through the expansion of existing Special Areas and the creation of new Special Areas. The Alternatives could result in up to 67 percent of the entire NPR-A being in Special Area status, which may, in turn, prohibit pipeline construction. Whether intended or not, the expansion of Special Areas and the designation of Wild or Scenic Rivers within the NPR-A will significantly impede, or even prevent, energy companies from developing and marketing oil and gas discovered in the NPR-A or the Chukchi and Beaufort Seas.

[46.002] Impairing or eliminating a company's ability to discover and market oil and gas from the NPR-A not only conflicts with federal law, but it also undermines the Executive Orders discussed above. More specifically, prohibiting or restricting an energy company's ability to construct transportation infrastructure across the NPR-A would clash with EO 13580, which seeks to ensure that federal agencies implement policies and regulations that enable "the safe

and responsible development of onshore and offshore energy resources and associated infrastructure in Alaska and to help reduce our dependence on foreign oil" and this EO directs federal agencies to "engage in long term planning" to "ensure . . . the development of necessary infrastructure to adequately support energy development in Alaska."

The Alternatives discussed in the IAP/EIS would also undercut EO 13604, which seeks "to significantly reduce the aggregate time required to make decisions in the permitting and review of infrastructure projects by the Federal Government, while improving environmental and community outcomes[]" by directing federal to provide a "transparent, consistent, and predictable path for both project sponsors and affected communities."

And, finally, the lack of clarity generated by the Alternatives utterly contradicts EO 13563, which is designed to improve the regulatory review process by ensuring that the federal regulatory system "protects public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation . . . . It must promote predictability and reduce uncertainty."

Put simply, the NPR-A is a petroleum reserve. The BLM should manage these lands consistent with Congressional intent – i.e., in a manner that accommodates responsible exploration and production of oil and gas resources in the NPR-A and the construction of the necessary infrastructure to support development of resources in the NPR-A and the Beaufort and Chukchi Seas. Yet the draft IAP/EIS does not accomplish this goal. Nor does it comply with President Obama's Executive Orders – i.e., the Alternatives do not promote predictability and reduce uncertainty, they will hamper resource development, which will in turn increase our dependence on foreign oil, and they will not lead to job growth because the draft IAP/EIS does not set out a clear and certain plan that ensures companies developing oil and gas in the NPR-A or the Beaufort and Chukchi Seas will be able to transport the resources to market in an economical, safe, and responsible manner.

Of the four alternative approaches under consideration, Nordaq believes that only a significantly modified Alternative D would serve the stated objectives of Congress and the Administration. Alternative D, provided appropriate modification are made consistent with the comments submitted by Shell (and other industry representatives), will meet the original purpose and intent of the NPR-A, and is the only Alternative to support the continued development of these lands in the best interest of the people of the United States.

Nordaq appreciates the opportunity to review the IAP/EIS. If there are any questions regarding these comments, please contact Glenn Ruckhaus at (907) 375-1812.

Sincerely,
Nordaq Energy, Inc.
Paul L. Devine
Chief Financial Officer

[Response to 46.001]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope.

However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. It properly describes the development that may be associated with such infrastructure in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development" and appropriate analysis of associated cumulative impacts is provided in Chapter 4, Section title "Cumulative Effects on the Environment."

[Response to 46.002]
While BLM must follow relevant Executive Orders, it must also follow the NPRPA which requires an expeditious program of oil and gas leasing, consistent with protection of surface resources. Reasonable restrictions on infrastructure in NPR-A which protect surface resources are consistent with federal law and the NPR-A's enabling legislation.

COMMUNICATION NUMBER 47
Carl Portman, Deputy Director
Resource Development Council

June 14, 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

Re: Draft IAP/EIS for National Petroleum Reserve-Alaska

To Whom It May Concern:

On behalf of the Resource Development Council for Alaska, Inc. (RDC), I am writing to comment on the Draft Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve-Alaska (NPR-A). RDC strongly urges the Bureau of Land Management (BLM) to move forward with a comprehensive plan that allows for significantly expanded oil and gas exploration and development in NPR-A, as well as infrastructure development to carry offshore oil and gas resources to the Trans-Alaska Pipeline System (TAPS). The IAP/EIS should also consider opening NPR-A to mineral entry.

RDC is a statewide, non-profit, business association comprised of individuals and companies from Alaska's oil and gas, mining, timber, tourism and fisheries industries. Our membership also includes Native regional and village corporations, local governments, organized labor and industry support firms. RDC's mission is to help grow Alaska's economy through the responsible development of natural resources.

As stated in our September 8, 2011 scoping comments on the IAP/EIS, RDC believes all of NPR-A should be open to oil and gas leasing, with surface protections that mitigate potential impacts but do not preclude development and transportation of onshore and offshore resources. Industry has proven responsible development can occur in sensitive areas.

[47.001] BLM should include solid provisions in the IAP/EIS for efficient transportation corridors within NPR-A to facilitate future oil and gas development in the Outer Continental Shelf (OCS) and potential offshore development in state waters of the Beaufort Sea.

With regard to state leases in the Beaufort Sea, RDC is concerned that development of these assets could be hindered or precluded by the designation of Special Areas spanning the coastline. **[47.002]** The Draft IAP/EIS currently precludes a pipeline corridor through the Special Areas, potentially stranding offshore reserves in the Beaufort Sea. The IAP/EIS should consider a pipeline corridor into the petroleum reserve for the efficient and safe transport of Beaufort Sea resources to market.

Given NPR-A is a petroleum reserve, BLM should manage the area in a manner that facilities oil and gas production and the development of vital infrastructure for both onshore and offshore development. The significant enlargement of Special Areas and proposed Wild and Scenic River designations, as recommended in Alternative B, could affect the ability of onshore and offshore operators to lease areas for development, as well as build and operate infrastructure necessary to transport oil and gas in an efficient manner to market. In addition, such designations would likely diminish the potential recovery of much needed energy resources for Alaska and the nation.

Alaska and the federal government have already designated significant portions of the state for conservation purposes. In fact, Alaska contains 90 percent of all national park lands, more than 80 percent of national wildlife refuge lands, and more than half of all federally-designated Wilderness. The Special Areas proposed for NPR-A are essentially de-facto wilderness that would block exploration of the most prospective areas of the energy reserve.

Although the IAP acknowledges that land management practices in NPR-A should provide for necessary pipelines and other infrastructure to carry OCS resources in the Chukchi Sea to TAPS, each of the proposed alternatives include significant restrictions which could inhibit permitting and construction of a pipeline across the reserve.

A pipeline is essential to deliver oil from the Chukchi Sea to TAPS. The potential 27 billion barrels of oil offshore could reduce the nation's trade deficit by $25 billion annually, generate more than $193 billion in government revenues, create an annual average of 55,000 new jobs, $145 billion in new payroll, and add up to one million barrels per day to TAPS – Alaska's economic lifeline.

Oil and gas development

Three decades of oil and gas activity in the Arctic clearly demonstrate that industry has the capability to operate throughout Alaska's North Slope while maintaining high standards of safety and environmental sensitivity. Advances in technology have greatly reduced industry's footprint, allowing for the preservation of more surface acreage within the oil fields for wildlife habitat. In addition to technological advances, scientific studies conducted since 1998 have greatly improved the agency's knowledge of the biological resources within the petroleum reserve.

Given NPR-A was specifically designated by Congress for the production of energy resources and the need for new oil production has increased, it is important BLM provide access to NPRA's best prospects. However, the IAP/EIS does just the opposite in closing lands inside the reserve that are considered to be among the most oil-rich in NPR-A. North Slope oil and gas deposits have occurred almost exclusively within a 25-mile strip of the Beaufort Sea coastline – a geologic structure known as the Barrow Arch. Acreage within this area could hold significant deposits and should be open to development. Yet under Alternatives B and C most of the highly prospective acreage would be off-limits.

These closures would only serve to significantly reduce ultimate recovery of oil from the petroleum reserve with little or no benefit to the environment and wildlife. If BLM removes the best prospects from future leasing, there is unlikely to be significant industry interest going forward in the petroleum reserve.

RDC is concerned with the alarming trend over the past 15 years of "locking up" potential oil-rich lands in NPR-A. Through the previous planning processes, 219,000 acres under Teshekpuk Lake were withheld from leasing and 430,000 acres north and east of the lake were deferred until 2018. In addition, 1.57 million acres in Northwestern NPR-A were deferred from leasing until 2014. More recently, hundreds of thousands of acres south of Teshekpuk Lake were removed from lease sales because of migratory and caribou habitat concerns. We are very much concerned that the trend is clearly toward less leasing and less access. Much of the most prospective acreage within the Barrow Arch has now been removed or deferred, including those closest to potential future production. It is important to remember this is a petroleum reserve.

With climate change and polar bear critical habitat introduced into the new planning process, anti-development forces are using these and other issues to demand the removal of additional acreage from exploration. Once areas have been removed, a dangerous precedent has been set. Assuredly, special interest groups will challenge any reinstatement in the future.

[47.003] The IAP/EIS may not label its Special Areas as federally-designated Wilderness, but it has the same impact on future development. This point should be acknowledged in the document. **[47.004]** It should also be acknowledged in the IAP/EIS that oil and gas reserve estimates in the petroleum reserve are highly uncertain and will not be confirmed until drilling actually occurs. The U.S. Geological Survey originally estimated that NPR-A could contain approximately 10 billion barrels of oil, but the latest estimate was sharply revised downward. Predictably, some non-development groups have suggested the resources in place are insignificant and not worth developing. However, it should be acknowledged that the area has

the potential to contain significant reserves. In addition, **[47.005]** the IAP/EIS should point out that if any exploratory drilling were to occur, it would take place in the winter to avoid impacts on wildlife, habitat, and waterfowl.

RDC recognizes coastal areas of the petroleum reserve contain large populations of waterfowl and caribou and are coveted by local residents for subsistence hunting. However, a variety of protective measures, operating procedures, standards, and stipulations can be employed to mitigate impacts. These measures are in place elsewhere on the North Slope where energy development is occurring and they have successfully mitigated impacts.

We urge BLM through the IAP to provide access to NPR-A's prospective acreage while providing reasonable measures to mitigate impacts. These measures should be both technically and economically feasible.

The final plan should encourage access, expansion of important infrastructure into the petroleum reserve, and plant the seed for industry interest in future lease sales. Such a plan is vital and most appropriate to encourage energy exploration and production inside a petroleum reserve – and access for development of offshore resources in the OCS – at a time when there is an ever-increasing need for new domestic energy production.

In fact, BLM has a moral obligation to open NPR-A's highly prospective acreage to exploration, given the nation imports more than 50 percent of the oil it consumes and the threat high energy prices pose to Americans. Moreover, new energy production from the petroleum reserve is essential to maintaining a viable trans-Alaska oil pipeline, which is now operating at one-third the volume reached 20 years ago. It is unreasonable to expect state lands to continue to support the oil pipeline when most of the North Slope's remaining oil is located on federal lands. If most of the coastal areas of NPR-A are removed from exploration, then most of the energy reserve's potential will be gutted and industry interest and investment will move beyond Alaska.

In the best interest of Alaska and the nation, RDC urges BLM to refrain from setting aside highly prospective lands from development and move forward with clear and transparent actions that open NPR-A to its intended use – responsible oil and gas exploration, development, and production. Continued withdrawal of prospective lands is detrimental to improving the North Slope exploration investment climate and ultimate production. Such action will only serve to increase America's reliance on foreign oil and weaken our economy.

Interestingly, had sensitive wildlife and wetland areas along the central North Slope coastal plain been withdrawn from exploration in the 1960s, there would have been no discovery of oil at Prudhoe Bay, Kuparuk, and other North Slope oil fields. Alaska would not have the economy and public infrastructure it has in place today, and the nation would have been forced to import at least an additional 16 billion barrels of oil over the past thirty years at a staggering cost. Instead, North Slope oil fields have elevated Alaska's economy over the past 30 years and the Central Arctic caribou herd has grown from 5,000 animals in 1970 to over 65,000 today.

Minerals and coal leasing

[47.006] RDC supports opening NPR-A to mineral entry, as well as industrial mineral and coal leasing. We understand BLM does not have the authority to open the energy reserve to mineral entry, however, it can and should make such a recommendation to Congress. Ironically, the U.S. Fish and Wildlife Service does not have the authority to designate Wilderness in the Arctic National Wildlife Refuge, yet under a current planning process it is actively considering new Wilderness designations and has said it has the authority through the Secretary of Interior to make such a recommendation to Congress. If that is indeed the case, then BLM should pursue a similar approach for opening NPR-A to mineral entry.

Such an option should be included in the IAP/EIS. **[47.007]** Provisions for a transportation corridor in South NPR-A should also be considered to facilitate potential future mineral development. Given the outstanding track record of the mining industry in the arctic and sub-

arctic, the technological advances of the past decade, and the increasing need for strategic minerals, it makes sense to open the area to mineral exploration.

Specifically, the northern foothills of the Brooks Range have significant potential for base metals discoveries similar to the rich zinc and lead ores found at Red Dog Mine. It is well known that the region also holds significant deposits of copper and iron, as well as some of the most significant coal deposits anywhere in the world. In fact, America is called the "Saudi Arabia of coal," partly because of the reserve base inside NPR-A. This coal resource could potentially be converted to high grade liquid fuel that could be transported and provide for U.S. fuel needs for more than an entire century.

The mining industry has proven it can explore and develop potential reserves in a way that minimizes impacts on the environment, traditional subsistence activities and cultural resources. Industry has taken the best practices and technology of the past 30 years of arctic development in both Alaska and Canada and has applied them to the latest generation of mineral development. This has led to a new and higher standard for responsible development and has reduced industry's footprint in sensitive areas.

Conclusion

The discovery and development of new oil, gas, mineral and coal deposits in NPR-A will benefit Alaska, local communities and the nation. Revenues generated from such development will help sustain important local and state services. Industry activity will also provide new job opportunities for local residents and boost the economy. Development of new energy and mineral deposits will also enhance the nation's economy and security.

The nearly 90-year old NPR-A was specifically set aside because of its energy potential. Access to NPR-A, including its massive coal deposits, should be accommodated.

RDC encourages BLM to significantly expand oil and gas leasing in the petroleum reserve, including the highest prospective areas, with surface protections that mitigate impacts but which do not preclude development and transportation of onshore and offshore resources. Industry has proven responsible development can occur in sensitive areas. The reserve should also be opened to mineral entry to facilitate future exploration of needed mineral resources. The areas with high mineral and coal potential should not be placed in non-development management units that would preclude future development. Foreclosing future development opportunities would block the benefits of valuable mineral and energy resources to future generations.

Please manage the petroleum reserve to be a true energy and mineral reserve. Thank you for your consideration of our comments and concerns.

Sincerely,
Carl Portman
Deputy Director

[Response to 47.001]
Making decisions regarding onshore infrastructure to support offshore development is inappropriate in the IAP/EIS. Such decisions are not part of the plan's purpose and need.

[Response to 47.002]
The preferred alternative provides opportunity for pipeline and other infrastructure necessary for Beaufort Sea oil and gas development to utilize NPR-A.

[Response to 47.003]
Special Area designation does not restrict future development. The BLM has leased lands in Special Areas in the past, some current leases are in Special Areas, and all of the alternatives in the current plan would allow leasing in some Special Area lands.

[Response to 47.004]
The IAP/EIS describes the uncertainty involved in estimating undiscovered oil and gas reserves in section 3.2.6.3.

[Response to 47.005]
The IAP/EIS states that exploratory drilling takes place in winter and the analysis in Chapter 4 for many species of wildlife note that this avoids or minimizes impacts.

[Response to 47.006]
The BLM has determined that it would not recommend legislation to allow hard-rock and coal mining as part of this plan. For a discussion of that determination, see section 2.4.3.

[Response to 47.007]
Transportation facilities would be possible in southern NPR-A under Alternative D. However, because the NPR-A would not be open to mineral development (see section 2.4.3), providing a transportation corridor to facilitate such development is moot.

COMMUNICATION NUMBER 48
Peter Slaiby, Vice President
Shell Alaska

June 15, 2012

Bud Cribley
Alaska State Director
Bureau of Land Management
222 W. 7th Avenue, #13
Anchorage, AK 99513-5421

Subject: Shell Exploration and Production Comments on
BLMs Draft Integrated Activity Plan / Environmental Impact Statement for the National Petroleum Reserve - Alaska

Shell Exploration & Production Company (SEPCo), on behalf of Shell Gulf of Mexico Inc. (SGOMI) and Shell Offshore Inc. (SOI) (collectively, Shell) are pleased to provide the attached comments on the Draft Integrated Activity Plan and Environmental Impact Statement (Draft IAP/EIS), which the Bureau of Land Management (BLM) has prepared in an effort to determine future land management practices in the National Petroleum Reserve Alaska (NPR-A). SGOMI is the largest lease holder in the Chukchi Sea, with 275 leases purchased for over $2.1 billion (USD). Together with SOI's investment in the Beaufort Sea, SGOMI and SOI have a total investment of more than $4.5 billion (USD). We are currently looking forward to the first exploration drilling opportunity in the Chukchi Sea since the early 1990s.

The U.S. Department of Interior estimates that the Alaska Outer Continental Shelf (OCS) holds one of the world's largest untapped energy resources, with an estimated 27 billion barrels of oil and 132 trillion cubic feet of natural gas in place which could produce an average of 700,000 barrels per day for 40 years. Publicly available studies indicate this could reduce the nation's trade deficit by $25 billion per year with an annual average of 55,000 new jobs created and sustained for 50 years.

Although several options exist for transporting oil and gas from the Chukchi Sea OCS to market, the preferred alternative is a pipeline to shore and then across the North Slope to the Trans Alaska Pipeline System (TAPS). Management of the NPR-A, which encompasses much of the North Slope, is therefore of great importance. Land management restrictions would affect and could potentially prevent the construction of a pipeline across the NPR-A and subsequent transportation of Chukchi Sea oil and gas resources to market through TAPS, as well as a to-be-constructed natural gas pipeline from the North Slope to points south.

The Purpose and Need section of the IAP/EIS states that one of its purposes is to ensure that BLM's land management practices in the NPR-A will provide the opportunity to construct the necessary pipelines and appurtenances to bring Chukchi Sea oil and gas resources to TAPS, yet the document provides no descriptions or analyses of such projects. In fact, each of the proposed Alternatives incorporates significant land management restrictions in the form of Special Areas, Wild and Scenic Rivers, stipulations, required operating procedures (ROPs), and best management practices (BMPs), or limits on non-subsistence infrastructure that could greatly impact a Chukchi Sea leaseholder's ability to permit and construct a pipeline across NPR-A to TAPS.

The following are Shell's key concerns on the IAP/EIS
1. IAP/EIS lacks analyses of potential pipelines
2. Primary intent of NPR-A has been devalued
3. Special Areas restrict multiuse
4. Wild and Scenic Rivers determinations are outside of the IAP/EIS scope
5. Alternatives not represented equally

6. Shell recommends that BLM select Alternative D with noted modifications
7. Shell requests that BLM remove Alternative B from further consideration

Each of these concerns are captured below, with additional detailed comments provided in Attachment A.

1. The IAP/EIS lacks analyses of potential pipelines: Shell agrees with BLM's Purpose and Need Statement, in which BLM states that one of the purposes of the IAP/EIS is "to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process to construct necessary onshore infrastructure, primarily pipelines and roads, to bring oil and gas resources from leases in the Chukchi Sea to the TAPS or a future gas pipeline from the North Slope." All four Alternatives also contain language indicating that a pipeline from the Chukchi Sea to TAPS could be permitted under the identified land management practices; however, Alternatives B, and C also prohibit such infrastructure over large areas (lands where new non-subsistence infrastructure is prohibited). **[48.001]** The IAP/EIS contains no descriptions of what a Chukchi Sea to TAPS pipeline might look like, where it might be built, and what the impacts of construction and maintenance of such a pipeline and related infrastructure might be, and therefore provides little assurance that such a project could be developed under the considered land management Alternatives. Shell requests that BLM include descriptions and analyses of such pipelines in the IAP/EIS.

a. Descriptions and impact analyses should include all major activities and appurtenances that would be required for construction and operation of the pipeline, including but not limited to: camps, airstrips, water and gravel sources, roads, stream crossings, valve stations, power sources and distribution system and pump stations. Shell has provided some additional information regarding pipeline construction, operation and infrastructure in Attachment B.

b. **[48.002]** BLM should consider multiple hypothetical corridor alternatives for such a pipeline, located in distinctly different areas of interest defined by connecting potential landfall locations along the Chukchi Sea shoreline to endpoints along TAPS, such as examples presented in Attachment C. As shown in the figure, the interior region north of the Brooks Range could be divided into three distinct areas in which hypothetical pipeline corridors can be placed.

i. The Arctic Coastal Plain (A) in the north, with a Chukchi Sea landfall between a point south of Barrow and Pt Belcher. This corridor should be considered as it is represents an area where a selected route would traverse the shortest distance, contain a large number of lakes that could be water resources, and encounter limited elevation changes.

ii. A centrally located area (B) covering the transition from the Arctic Coastal Plain to the Arctic Foothills with a Chukchi Sea landfall between Pt Belcher and northern extent of Kasegaluk Lagoon Special Area. This corridor represents an area where a selected pipeline route would be of medium length, contain fewer lakes, and encounter only moderate changes in elevation.

iii. The Arctic Foothills (C) in the south, with a Chukchi Sea landfall between the northern extent of Kasegaluk Lagoon Special Area and a point south of Pt Lay. This corridor should be considered because it represents the area where a pipeline route would probably encounter less permafrost, although it would be of a longer distance than in the other corridors, would encounter a limited number of lakes, and would have more elevation changes.

The western endpoints for the hypothetical pipeline corridors should include TAPS Pump Stations 1, 2, and 3. Ultimately, the optimal pipeline corridor could easily cross the notional boundaries of the areas described above, for example a central shore crossing (western extent of area B) could easily link to a northern or southern TAPS connection at Pump Station 1 or 3 (eastern extent of A or C) and potentially serve to evacuate prospective areas of oil and potentially gas development contained in the NPR-A.

c. **[48.003]** BLM should indicate any areas within the above-referenced hypothetical corridors where pipeline construction and/or operation and maintenance would or would not be permitted. The IAP/EIS is very unclear as to where pipelines may be permitted or not, with prohibitions of

new non-subsistence permanent infrastructure over much of the NPR-A being incorporated in each of the Alternatives. Pipeline infrastructure required to move oil and gas from the Chukchi coast to TAPS should be considered separate from other permanent oil and gas infrastructure required to develop NPR-A leases.

d. **[48.004]** BLM should consider in the analyses that resources may be required from different areas within the NPR-A for pipeline construction; for example gravel resources and water resources may be located in different areas and at distance from the pipeline corridor.

e. **[48.005]** BLM should clarify where crude oil transmission pipelines fit within the several terms used throughout the document to describe restriction on facility construction. These terms include such things as permanent oil and gas facilities, non-subsistence infrastructure, and oil and gas surface facilities. Shell suggests BLM develop a definition section with separate and distinct definitions for Chukchi to TAPS pipeline infrastructure for OCS oil transport versus infrastructure required to develop NPR-A leases. It is imperative that pipeline appurtenances such as pump stations or compressors be considered part of the pipeline in these definitions.

2. Primary intent of NPR-A has been devalued: The Purpose and Need as described in Section 1.1 of the IAP/EIS stresses the appropriate management of all BLM managed lands in the NPR-A in a manner consistent with the Naval Petroleum Reserves Production Act of 1976 ('Act'). Alternatives selected for analysis refocus the land use of the NPR-A for conservation or restrict multiuse capacity. For example, the percent of NPR-A lands available for leasing is as low as 48 percent in the Alternatives, and 37-67 percent of the petroleum reserve would be Special Area with significant restrictions on, or prevention of, oil and gas activities under the Alternatives. It is inappropriate to designate or select land management Alternatives for a petroleum reserve, in which less than half of the reserve is available for leasing and exploration. Additionally, all the services that residents of the North Slope enjoy (schools, health, emergency services) and their ability to engage in a subsistence lifestyle are mainly supported by revenue generated through the development of oil on the North Slope. Limiting oil and gas development could have a significant negative impact on the revenues of North Slope communities and reduce the cash available and needed to support subsistence activities.

3. Special Areas restrict multiuse: All four Alternatives include the maintenance and management of large Special Areas, which have associated stipulations, ROPs, and BMPs, that could prevent the construction of a pipeline. The acreage of Special Areas within the NPR-A is significantly increased in Alternatives B and C through the expansion of existing Special Areas (e.g., Teshekpuk Lake SA) and/or creation of new Special Areas (e.g., Peard Bay SA). Some of the existing Special Areas should be reduced or eliminated. For example, the Colville River SA was created to protect the Arctic Peregrine Falcon which was listed as a threatened and endangered species at the time. Since then, the Arctic Peregrine Falcon has been removed from the list of threatened and endangered species. Despite the de-listing, under all four Alternatives, the Colville River SA is maintained at its current size, and actually provided with expanded conservation measures to now cover all raptor species, none of which are threatened or endangered. The Alternatives would result in up to 67 percent of the entire NPR-A being in Special Area status, which may prohibit pipeline construction, operation, or maintenance. This is unacceptable for an area dedicated for the development of oil and gas resources. The BLM should not consider the expansion of current or the creation of new Special Areas, and should dissolve Colville River SA as its initial purpose is no longer relevant.

4. Wild and Scenic Rivers determinations are outside of the IAP/EIS scope: Alternatives B and C include the recommendation of 12 rivers as Wild Rivers and three rivers as Scenic Rivers respectively. These rivers largely flow from the south to the north. Therefore, any restrictions on pipeline construction could make it difficult or prohibitive to transporting oil and gas to TAPS or elsewhere. **[48.006]** In Section 1.4.c, where the idea of creating Wild and Scenic Rivers is introduced, the IAP/EIS does not include language that requires the decisions regarding the designation or recommendation of rivers to be wild and scenic to be made in accordance with the Act, and therefore such designations or recommendations should not be included as part of any

Alternative. Such designations are not in accordance with the purpose of the NPR-A. It is unclear what would constitute "essential pipeline crossings" and whether additional restrictions would be forthcoming if recommendations were to be acted on by Congress. Shell strongly urges BLM to remove recommendations for Wild and Scenic Rivers from any and all Alternatives considered in the IAP/EIS process.

5. Alternatives not represented equally: **[48.007]** The ANILCA 810 Analysis (Appendix A of the IAP/EIS) provides a disproportionately greater review of Alternative D compared to the other three Alternatives, and provides unsupported conclusions. This slants the reviewer's perception that Alternative D would have significant impacts on subsistence activities if this Alternative were to be selected. Shell recommends that additional review and resources be referenced for this analysis and believes that an analysis with similar detail should be provided in a fair and balanced manner for all Alternatives regarding potential impacts to subsistence activities and resources.

6. Shell recommends that BLM select Alternative D with the above-discussed modifications as: Alternative D best meets the intent of the Act; most fully meets the stated purposes of the IAP/EIS; and would provide the best opportunity to identify a commercially viable route by optimizing the siting and construction of a pipeline system to transport Chukchi Sea OCS oil and gas resources to market.

7. Shell requests that BLM eliminate Alternative B from detailed consideration. It is imperative that Alternative B not be selected as the land management strategy for the NPR-A going forward in any Record of Decision, as the Alternative fails to meet the explicit Purpose and Need statement in the IAP/EIS for the following reasons:

a. Over half (approximately 52%) of the federal lands in the NPR-A would be unavailable for leasing for exploration under this Alternative – this is inappropriate for lands set aside as a National Petroleum Reserve – and counter to the intent and stated direction of the Act, which calls for an expeditious program of competitive leasing of oil and gas in the NPR-A. BLM states on Page 1 of the IAP/EIS that the Act requires oil and gas leasing be conducted in the NPR-A, and that surface values be protected to the extent consistent with exploration and development of oil and gas. Removal of this large amount of acreage from the leasing program is a complete prohibition of exploration and therefore not consistent with oil and gas exploration and development.

b. Over 11,600,000 acres (52% of federal lands in the NPR-A) would be subject to a prohibition on new non-subsistence infrastructure under this Alternative. These lands extend the breadth of the NPR-A from both east to west and north to south. No pipeline route is possible within two of the three areas of interest (A & C) as hypothetical pipeline corridors identified in Attachment C without traversing areas that would be under this prohibition. While it might be possible to identify pipeline routes extending from the Chukchi Sea to TAPS that do not traverse these lands, the route may be so circuitous to reach some of the indentified endpoints at TAPS that it would render the pipeline prohibitively expensive, and potentially create additional environmental impacts. These routes are also essentially unstudied at the moment. BLM states on Page 1 of the IAP/EIS that one of the purposes of the document is to ensure that BLM's land management practices will provide the opportunity to construct necessary infrastructure such as pipelines and roads to transport oil and gas resources from the Chukchi Sea to TAPS. This opportunity likely does not exist under Alternative B.

c. A total of 12 streams would be recommended for designation as Wild Rivers under Alternative B. Eleven of these streams flow north to south for about 50 miles. The 12th, the Colville River, flows west to east and then northward across the entire NPRA. **[48.008]** The BLM is unclear in the IAP/EIS regarding what kind of additional restrictions might apply to these rivers if they are recommended (as BLM manages recommended streams as if designated) and subsequently if they are designated. Under Stipulation K-1 of Alternative B, pipelines would generally be prohibited within 0.5 miles of the aforementioned streams and within 2.0 miles of the Colville

River, although essential pipeline crossings may be permitted on a case-by-case basis. Because the additional restrictions, the definition of an essential pipeline crossing, and the outcome of caseby- case analyses are unknown, we believe that it may be difficult or impossible to obtain permits for a pipeline to transport Chukchi Sea oil and gas resources to TAPS – again failing to meet the identified purpose of the IAP/EIS.

d. Under Alternative B, the BLM would establish a new Special Area (Peard Bay SA) and expand three others, resulting in a total of 15,000,000 acres in Special Area status with additional restrictions on development. Additionally the new Peard Bay SA would be ten times greater in size under Alternative B than any other alternative. As stated above, some of the existing Special Areas should be reduced or eliminated, and the new Peard Bay SA should be greatly reduced or eliminated. For example, the Colville River Special Area was created to protect the Arctic Peregrine Falcon which has since been de-listed, and the Utukok SA was created for the protection of a diminishing caribou herd which has since grown to be the largest herd on the North Slope. The 1.6-million-acre Peard Bay SA would be established purportedly to protect haul-out areas and nearshore waters for marine mammals and habitat for waterbird and shorebird breeding, molting, staging, and migration, yet the SA extends 50 miles inland with no justification. Alternative B would also quadruple the size of the Kasegaluk Lagoon SA by extending it approximately 20 miles inland. No real justification is provided for extending the Special Areas for bays and lagoons established for the protection of marine species, so far inland. Alternative B's Special Area designation indicated that the most stringent protective measures would be applied to any proposed project. Special Area designation on over 67 percent of the entire NPR-A, and along all of the NPR-A lands bordering the Chukchi Sea, is contrary to the intent of the Act and establishment of the NPR-A, and could make it difficult or impossible to site a pipeline route from the Chukchi Sea to TAPS, defeating one of the stated purposes of the IAP/EIS.

9. **[48.009]** IAP/EIS lacks sufficient analysis of potential environmental studies: Various types of environmental studies are required to support oil and gas exploration and development in remote areas such as the NPR-A. Such studies include cultural resource surveys, fish and wildlife surveys, habitat surveys, physiographic studies, and hydrological studies. There is insufficient assessment of these studies in the Draft IAP/EIS and no specific impact analyses. Shell is presently conducting some such studies and plans to conduct additional studies in future years, and requests that BLM provide additional descriptions of these types of studies and corresponding environmental impact analyses of typical or hypothetical studies in the IAP/EIS. BLM's analyses should include projects with helicopter support with 1,000 or more landings and take-offs, field crews totaling 50 persons or more, and housing of these crews in either existing camps in villages or remote/temporary camps in the NPR-A. These types of studies are critical for pipeline siting and design, and it is important that they are considered in the subject NEPA anaylsis from which project specific analyses can be tiered in the future.

Shell appreciates the opportunity to review the IAP/EIS. If there are any questions regarding these comments, pelase contact Susan Childs at (907) 771-7112 or at susan.childs@shell.com

Sincerely,
Peter E. Slaiby
Vice President, Shell Alaska

Attachment A

Shell's Review of BLM's Draft IAP/EIS for the NPR-A

Submitted as part of Shell Exploration and Production's (Shell's) Comments on the Bureau of Land Management's (BLM's) Draft Integrated
Activity Plan / Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve - Alaska

[48.010] #: 1, Chap: Exec Summary, Sec: -, Page ii DEIS Text / Statement Chukchi Sea Development. Chukchi Sea oil and gas resources are considered some of the most promising in the nation. One of the purposes of this plan is to provide an opportunity, subject to appropriate conditions, to construct necessary onshore infrastructure to transport oil and gas resources from offshore leases in the Chukchi Sea to the Trans-Alaska Pipeline System and proposed gas pipelines. Shell Issue / Comment Other than these types of statements in the beginning of the document there is little treatment of pipelines from the Chukchi Sea to TAPs – no discussion of landfalls, routes, impacts, etc. Shell requests that BLM conduct impact assessments of hypothetical pipeline corridors from the Chukchi Sea to TAPS across a) the foothills region; b) the upper coastal plain, and c) the lower coastal plain. The analysis should consider the pipeline, typical appurtenances such as roads and stations, and construction requirements (e.g., gravel, water).

[48.011] #: 2, Chap: 1, Sec: 1.2, Page 1 DEIS Text / Statement The North Slope Borough, the State of Alaska, the U.S. Fish and Wildlife Service (USFWS), and the U.S. Bureau of Ocean Energy Management are participating in the IAP/EIS as cooperating agencies. The BLM requested their participation because of their expertise. Shell Issue / Comment NMFS should be a cooperating agency as well because BLM is identifying marine mammal mitigation measures. What about DOT and Corp of Engineers, as they will also be cooperating agencies for our onshore common carrier pipeline EIS?

[48.012] #: 3, Chap: 1, Sec: 1.4c, Page 3 DEIS Text / Statement e. Wild and Scenic Rivers Designation Scoping comments identified many rivers in the NPR-A for consideration for recommendation as a Wild and Scenic River (W&SR). Consideration of W&SR designation is mandated by the W&SR Act when "planning for the use and development of water and related land resources" is consistent with the settlement agreement reached between American Rivers and the Department of the Interior in 1993, is consistent with the purpose and need to protect surface resources, and can be done in a manner consistent with oil and gas leasing. Consequently, the plan will consider the suitability of rivers for recommendation for designation as W&SRs. Shell Issue / Comment The mandates of the NPRPA should be referenced.

#: 4, Chap: 1, Sec: 18, Page 9/10 DEIS Text / Statement Several laws pertain to the protection of plants and animals and their habitats. The Endangered Species Act (ESA) provides for conserving endangered and threatened species of plants and animals. The ESA also requires that federal agencies consult with the U.S. Fish and Wildlife Service and the NOAA Fisheries Service to ensure that any actions that they authorize, fund, or carry out are not likely to jeopardize the continued survival of a listed species or result in the adverse modification or destruction of its critical habitat. The Magnuson-Stevens Fishery Management and Conservation Act requires consultation with the NOAA Fisheries Service on essential fish habitat. Shell Issue / Comment **[48.013]** There is no discussion of the Marine Mammal Protection Act (MMPA) in Section 1.8, despite the existence of marine mammals in coastal areas of the NPR-A, the requirement of operators to obtain MMPA authorizations, and BLM's inclusion of mitigation measures for marine mammals that could conflict with those associated with any MMPA authorization.

#: 5, Chap: 1, Sec: 1.8, Page 11 DEIS Text / Statement Section 810 of ANILCA addresses issues related to the effects of proposed activities on subsistence use. An ANILCA section 810 notice and public hearing process is required if a proposed action would significantly restrict subsistence uses. An evaluation and proposed finding of effects on subsistence uses and needs from actions that could be undertaken under this plan, provided in Appendix A, was based on information contained in this Draft IAP/EIS. Shell Issue / Comment **[48.014]** Given BLM's Purpose and Need Statement in the IAP/EIS includes supporting transmission of Chukchi Sea OCS oil/gas to TAPS, the requirements under ANILCA Title XI should be discussed in Section 1.8 as are the ANILCA 810 analysis requirements.

[48.015] #: 6, Chap: 1, Sec: 1.9, Page 12 DEIS Text / Statement The EPA and authorized states issue National Pollution Discharge Elimination System permits required by the Clean Water

Act; EPA is transferring authority to administer this program to the State of Alaska. Implementation of the transfer is to occur no later than May 2013. To provide information for these permits, any future NEPA document would describe existing water quality and the quantity of water requirements for the proposed project, expected pollutants and their concentrations, and the quality and locations of wastewater treatment facilities and discharges. The EPA administers, and the Alaska Department of Environmental Conservation issues, other Clean Water Act mandated permits for wastewater authorization, oil discharge prevention and contingency plans, storm water discharge, and underground injection authorizations. Shell Issue / Comment According to EPA and ADEC websites this transfer is to occur in October of 2012 not 2013.

#: 7, Chap: 1, Sec: 1.10, Page 13 DEIS Text / Statement To ensure local participation in the decision-making process as it relates to subsistence use in the NPRA, the BLM established a local subsistence advisory panel. The panel is responsible for reviewing resource-related development plans within the planning area and issuing recommendations to the BLM regarding whether the plans adequately consider subsistence Shell Issue / Comment Mandatory timelines should be established for this review process. The permittees must be allowed into any associated meetings or workshops.

#: 8, Chap: 2, Sec: 2.1, Page 15
DEIS Text / Statement
2.1 Introduction
This chapter presents four alternative approaches to achieving the purpose and need of the NPR-A IAP/EIS described in section 1.1. Alternative D would allow the BLM to offer all of the NPR-A for oil and gas leasing, while protecting surface values with a collection of protection measures.

Shell Issue / Comment Shell requests that BLM select Alternative D as the preferred alternative as it most fully meets the purposes and mandates of the National Petroleum Reserve – Alaska, and best meets the BLM's stated purpose of ensuring an opportunity for pipeline construction across the NPR-A from Chukchi Sea leases to TAPS.

#: 9, Chap: 2, Sec: 2.1, Page 15
DEIS Text / Statement
This chapter presents four alternative approaches to achieving the purpose and need of the NPR-A IAP/EIS described in section 1.1. Alternative A is the no-action alternative and reflects current management of the NPR-A established in the 2004 and 2008 records of decision for the Northwest and Northeast NPR-A, respectively, and the Colville River Special Area Management Plan of 2008. Alternative B describes a future management that emphasizes the protection of the surface resources of NPR-A with substantial increases in areas designated as Special Areas, designation of extensive areas that would be unavailable for leasing around Teshekpuk Lake and in the southwestern part of the Reserve with important caribou habitat and important primitive recreation values, and recommendation for designation of 12 Wild and Scenic Rivers, while still offering opportunities for oil and gas leasing on nearly half of the Reserve. Alternative C provides for smaller additions to Special Areas than Alternative B, makes unavailable for leasing the most remote part of NPR-A that has the greatest potential for providing a primitive recreation experience, provides for leasing with extensive surface protection stipulations near Teshekpuk Lake, and recommends three rivers for designation as Wild and Scenic Rivers, while offering opportunity to lease oil and gas resources in more than three-quarters of the Reserve. Alternative D would allow the BLM to offer all of the NPR-A for oil and gas leasing, while protecting surface values with a collection of protection measures. This chapter also describes alternatives considered but eliminated from detailed analysis and the reasons why these alternatives were eliminated from further consideration. Finally, Table 2-4 summarizes the impacts of the alternatives considered in detail in this IAP/EIS.

Shell Issue / Comment
It is inappropriate to have an alternative in which less than half of a petroleum reserve is eligible for leasing and exploration.

#: 10, Chap: 2, Sec: 2.1, Page 15
DEIS Text / Statement
This chapter presents four alternative approaches to achieving the purpose and need of the NPR-A IAP/EIS described in section 1.1. Alternative A is the no-action alternative and reflects current management of the NPR-A established in the 2004 and 2008 records of decision for the Northwest and Northeast NPR-A, respectively, and the Colville River Special Area Management Plan of 2008. Alternative B describes a future management that emphasizes the protection of the surface resources of NPR-A with substantial increases in areas designated as Special Areas, designation of extensive areas that would be unavailable for leasing around Teshekpuk Lake and in the southwestern part of the Reserve with important caribou habitat and important primitive recreation values, and recommendation for designation of 12 Wild and Scenic Rivers, while still offering opportunities for oil and gas leasing on nearly half of the Reserve. Alternative C provides for smaller additions to Special Areas than Alternative B, makes unavailable for leasing the most remote part of NPR-A that has the greatest potential for providing a primitive recreation experience, provides for leasing with extensive surface protection stipulations near Teshekpuk Lake, and recommends three rivers for designation as Wild and Scenic Rivers, while offering opportunity to lease oil and gas resources in more than three-quarters of the Reserve. Alternative D would allow the BLM to offer all of the NPR-A for oil and gas leasing, while protecting surface values with a collection of protection measures. This chapter also describes alternatives considered but eliminated from detailed analysis and the reasons why these alternatives were eliminated from further consideration. Finally, Table 2-4 summarizes the impacts of the alternatives considered in detail in this IAP/EIS.

Shell Issue / Comment
Primitive recreational experiences are abundant in AK. Setting this area of a petroleum reserved aside is not appropriate if there isn't any significant biological reason for protecting the resource.

#: 11, Chap: 2, Sec: 2.1.1, Page 16
DEIS Text / Statement
The BLM is analyzing this range of alternatives to ensure that a wide range of management options are considered, consistent with the law and that address public scoping suggestions and agency concerns for protection of resources.
Shell Issue / Comment
[48.016] To be a truly broad range of alternatives that meets NEPA guidelines, the BLM should consider a scenario with reduced ROPs and Lease Stipulations. It appears that all ROPs and stipulations have been carried forth from existing IAPs to the alternatives in this document.

#: 22, Chap: 2, Sec: 2.1.2, Page 16
DEIS Text / Statement
The NPR-A currently includes four designated Special Areas (see section 3.3.9). The Teshekpuk Lake Special Area was designated primarily to protect important nesting, staging, and molting habitat for a large number of waterfowl. The area also provides important habitat for caribou and serves as an important area for subsistence resources and uses. The Colville River Special Area lies along that river and two of its larger tributaries, the Kogosukruk and Kikiakrorak rivers. The area was designated to protect the arctic peregrine falcon, which inhabits bluffs within the Special Area and was listed as an endangered species at the time the Colville River Special Area was designated; the species was delisted in 1994.
Shell Issue / Comment
Existing Special Areas should be abandoned where it makes sense. **[48.017]** The Colville River Special Area was designated for the arctic peregrine falcon, which was listed as a threatened and endangered species at the time. The species has been de-listed because the population

rebounded. The stressor on the falcon population was DDT not activities on the North Slope. The Special Area should therefore be withdrawn not expanded.

#: 23, Chap: 2, Sec: 2.1.1, Page 16
DEIS Text / Statement
The Utukok River Uplands Special Area encompasses nearly 400,000 acres in the southwestern portion of the NPR-A. It was designated in 1977 because of its critical importance for the Western Arctic Herd of caribou, which was then in decline, but today is the largest herd on the North Slope. The BLM created the Kasegaluk Lagoon Special Area pursuant to the record of decision for the Northwest NPR-A IAP. The 2004 record of decision explained that it was being created "primarily because of high values for marine mammals." Alternatives B and C would enlarge existing Special Areas and designate a new Peard Bay Special Area. Special Area designation does not itself impose specific protections, but instead highlights areas and resources for which the BLM will extend "maximum protection" consistent with exploration of the Reserve.
Shell Issue / Comment
The special importance, ecological sensitivity, imminent threats, or any other reasons for designating Peard Bay as a Special Area have not been developed in the IAP/EIS. We recommend that Peard Bay be removed from consideration as a Special Area.

[48.018] #: 24, Chap: 2, Sec: 2.1.1, Page 16
DEIS Text / Statement
The Utukok River Uplands Special Area encompasses nearly 400,000 acres in the southwestern portion of the NPR-A. It was designated in 1977 because of its critical importance for the Western Arctic Herd of caribou, which was then in decline, but today is the largest herd on the North Slope.
Shell Issue / Comment
The reason the Utukok River Uplands Special Area was designated apparently no longer exists making the designation unnecessary. The Special Area should be removed not expanded. Reasons for the caribou decline had nothing to do with the activities that are now prohibited.

#: 25, Chap: 2, Sec: 2.1.1, Page 17
DEIS Text / Statement
Each alternative also identifies other areas with exceptionally important surface resources, many of which overlap the existing or proposed new or expanded Special Areas. Alternatives B and C would identify rivers suitable for Wild and Scenic River designation and recommend nomination of rivers for congressional designation as additions to the Nation's system of Wild and Scenic Rivers. Other areas identified in the "K" series of stipulations and on the alternative maps, such as the Teshekpuk Lake Caribou Habitat Area and the Teshekpuk Lake Goose Molting Area, are not in themselves administrative or legislative designations, and they carry with them no formal regulatory special status. They are simply areas that the BLM has identified through the planning process where resource concerns are provided special protections.
Shell Issue / Comment
The designations in the "K" series of stipulations would significantly increase the difficulty in routing a pipeline across the foothills region and potentially prohibit the mining of gravel required for pipeline construction. Because one of the purposes of the IAP/EIS is to ensure the opportunity for pipeline construction, the Wild & Scenic River recommendations should be removed from the alternatives

#: 26, Chap: 2, Sec: 2.1.1, Page 17
DEIS Text / Statement
The BLM will determine how the NPR-A will be managed, including how the purposes of any Special Areas will be achieved. In implementing this management, the BLM may consult with local residents. It may also confer with and/or otherwise invoke the resources and expertise of other federal, State, and local agencies and of tribes to assist in achieving these objectives.

Shell Issue / Comment
The effect of Special Area designation on land use cannot be evaluated by BLM in this document or by the public reviewers if BLM does not elucidate at this time what the land management practices will be. New Special Areas should therefore not be designated in this IAP/EIS.

#: 27, Chap: 2, Sec: 2.3.1, Page 19
DEIS Text / Statement
While this plan makes no decision regarding a corridor for infrastructure associated with offshore development such a corridor could be accommodated in this alternative, subject to appropriate conditions developed through a NEPA process.
Shell Issue / Comment
[48.019] BLM has not demonstrated how or where a pipeline corridor could be permitted given all the expansion of Special Areas and Wild and Scenic River recommendations inherent in the Alternatives. Hypothetical corridors should be considered. There is too much discretion in what may be permitted in these areas. It needs to be made more clear that pipelines would be allowable in these areas.
Speculative pipeline corridors were defined in Volume 2, pg. 44 and 45 (fig 4-9) for oil and gas developments for NPR-A leases, so a similar effort to define speculative corridors could be possible for a pipeline infrastructure evaluation for OSC development to TAPS.

#: 28, Chap: 2, Sec: 2.3.2, Page 19
DEIS Text / Statement
Alternative B makes 11 million acres or 48% of
NPR-A available for leasing.
Shell Issue / Comment
It is inappropriate to have an alternative in which less than half of a petroleum reserve is eligible for leasing and exploration. Alternative B should be removed from consideration, or at the very least not selected as a Preferred Alternative because it does not meet the Purpose and Need Statement articulated by BLM, or the purposes of the NPRPA.

#: 29, Chap: 2, Sec: 2.3.1, Page 19
DEIS Text / Statement
Lands with particularly high surface resource values, especially those within Special Areas, would continue to receive special protection through stipulations and required operating procedures. For example, caribou calving and insect-relief habitat would receive special protection through development restrictions and timing and spatial constraints on activities, and there would be setbacks for permanent oil and gas infrastructure and certain activities from lakes important for their waterfowl (including molting geese) and fish habitat, from rivers for their riparian values for many resources and subsistence use, and from the coast (including on barrier islands) to protect marine mammal and caribou insect-relief habitat. For a fuller description of these and other protections that would be ensured through leasing stipulations or permit requirements, see Table 2-3, particularly the "K" stipulations. Table 2-2 identifies additional measures associated with this alternative.
Shell Issue / Comment
The IAP/EIS needs a definition section, and the use of consistent terminology. It is unclear what constitutes such things as permanent structure oil and gas infrastructure or new nonsubsistence infrastructure – specifically pipelines – sometimes they are specifically excluded and sometimes they are not.

[48.020] #: 30, Chap: 2, Sec: 2.3.2, Page 20
DEIS Text / Statement
Within the unavailable lands in this alternative, the BLM generally would not permit new nonsubsistence permanent infrastructure (whether or not related to oil and gas activities) or exploratory drilling. There would be two exceptions to this prohibition. Following completion of appropriate NEPA analysis and subject to permit conditions, subsurface pipelines under the Wainwright Inlet/Kuk River and drilling and infrastructure necessary for exploration,

development, production, and abandonment of valid existing NPR-A oil and gas leases could be permitted.
Shell Issue / Comment
This is too limiting for pipeline corridors from offshore as the exceptions are only for drilling and infrastructure necessary for exploration, development, production, and abandonment of valid existing NPR-A oil and gas leases – not pipelines from the OCS.

#: 31, Chap: 2, Sec: 2.3.2, Page 20
DEIS Text / Statement
Alternative B would recommend congressional designation of all or portions of 12 rivers for inclusion in the W&S rivers system.
Shell Issue / Comment
[48.021] The discussion of Wild and Scenic Rivers designation in Section 1.4.c lacks any reference to requiring adherence to the mandates of the NPRPA.

#: 32, Chap: 2, Sec: 2.3.2, Page 20
DEIS Text / Statement
Alternative B would enlarge three Special Areas and create one new Special Area. It would add approximately 2 million acres to the Teshekpuk Lake Special Area to protect caribou calving and insect-relief areas and waterbird and shorebird breeding, molting, staging, and migration habitats. The purpose of the Teshekpuk Lake Special Area would be expanded to include the protection of important caribou and shorebird habitat as well as waterbird habitat, which was the original purpose for the Special Area. **[Preamble 48.022]** The alternative would expand the Kasegaluk Lagoon Special Area southward to encompass an additional 267,000 acres to offer protection to waterbird and shorebird breeding, molting, staging, and migration habitats. Alternative B would add approximately 3.1 million acres to the Utukok River Uplands Special Area to more fully encompass prime calving and insect-relief habitat within the NPR-A. Alternative B would also create a 1.6-million-acre Peard Bay Special Area to protect haul-out areas and nearshore waters for marine mammals and habitat for waterbird and shorebird breeding, molting, staging, and migration. The boundary of the Colville River Special Area would not change, but its purpose would be modified to protect all raptors, rather than the original intent of protection for arctic peregrine falcons.
Shell Issue / Comment
[48.022] No rationale or basis was provided for adding such a large amount of land to Special Area status. No connection is made between the surface resources to be protected and the activities that would be prohibited.

#: 33, Chap: 2, Sec: 2.3.2, Page 20
DEIS Text / Statement
Alternative B.
Other lands would be unavailable for leasing in Alternative B to protect marine habitat and shorelines important for marine animals, waterfowl, and shorebirds. These are the major coastal waterbodies—Elson Lagoon, Dease Inlet, Admiralty Bay, Wainwright Inlet/Kuk River, Peard Bay, and Kasegaluk Lagoon as depicted on Map 2-2—and their associated barrier islands and, in the case of Peard Bay and Kasegaluk Lagoon, lands within 1 mile of those two waterbodies. Within the unavailable lands in this alternative, the BLM generally would not permit new non-subsistence permanent infrastructure (whether or not related to oil and gas activities) or exploratory drilling. There would be two exceptions to this prohibition. Following completion of appropriate NEPA analysis and subject to permit conditions, subsurface pipelines under the Wainwright Inlet/Kuk River and drilling and infrastructure necessary for exploration, development, production, and abandonment of valid existing NPR-A oil and gas leases could be permitted.
Shell Issue / Comment
[48.023] The exception for subsurface pipelines indicated for the Wainwright Inlet – should be extended so that it applies to Kasegaluk Lagoon and Peard Bay.

#: 34, Chap: 2, Sec: 2.3.2, Page 21
DEIS Text / Statement
Alternative B would recommend congressional designation of all or portions of 12 rivers for inclusion in the National Wild and Scenic Rivers System. The Colville (where the BLM manages the riverbed and both banks in and above T6S, R17W, U.M.), Nigu, Etivluk, Ipnavik, Kuna, Kiligwa, Nuka, Awuna, Kokolik, and Utukok rivers and Driftwood and Carbon creeks would be recommended for wild river status.
Shell Issue / Comment
[48.024] Under Alternative B, a pipeline route through the foothills to TAPS would cross all the streams considered for Wild and Scenic River recommendation, and could therefore be problematic and not meet BLM's Statement of Purpose and Need in the IAP/EIS.

#: 35, Chap: 2, Sec: 2.3.3, Page 20
DEIS Text / Statement
Alternative C includes the same language with regard to pipeline corridors as found in Alternative B.
Shell Issue / Comment
[48.025] Under Alternative C, the prohibition on infrastructure on lands where new non-subsistence infrastructure is prohibited is unreasonable and could make siting a pipeline very difficult or impossible and not meet BLM's Statement of Purpose and Need in the IAP/EIS.

#: 36, Chap: 2, Sec: 2.3.3, Page 21
DEIS Text / Statement
Alternative C allows a new designation for a Peard Bay Special Area.
Shell Issue / Comment
Designation of Peard Bay Special Area is unwarranted, Other stipulations and ROPs already provide sufficient environmental protection.

#: 37, Chap: 2, Sec: 2.3.3, Page 21
DEIS Text / Statement
2.3.3 Alternative C
Alternative C makes more than three-quarters of the NPR-A available for oil and gas leasing. Selected coastal areas would not be available for oil and gas leasing. In addition, about 4.4 million acres would be unavailable for leasing in the far south of the Reserve. These southern lands possess: • The highest value wilderness characteristics, including qualities of naturalness and outstanding opportunities for solitude and primitive and unconfined recreation; • Important caribou habitat; and • Essentially no economically recoverable oil and gas according to the latest analysis by the U.S. Geological Survey.
Shell Issue / Comment
[48.026] BLM should clarify that pipelines would be allowed in areas that are unavailable for leasing.

#: 38, Chap: 2, Sec: 2.3.3, Page 22
DEIS Text / Statement
Alternative C.
Exploratory drilling and non-subsistence permanent infrastructure would not be allowed in the lands unavailable for leasing in the southern NPR-A and in the Kasegaluk Lagoon and Peard Bay Special Areas or within the above listed waterbodies, with the exception of a subsurface pipeline under the Wainwright Inlet/Kuk River or for infrastructure necessary for exploration, development, production, and abandonment of valid existing NPR-A oil and gas leases.
Shell Issue / Comment
The exception for subsurface pipelines indicated for the Wainwright Inlet – should be extended so that it applies to Kasegaluk Lagoon and Peard Bay.

#: 39, Chap: 2, Sec: 2.3.3, Page 22
DEIS Text / Statement
The prohibition that precludes construction of production pads and this phrase "This may require directional/horizontal drilling for substantial distances to reach oil and gas resources."
Shell Issue / Comment
This prohibition on production pads is inappropriate particularly considering the expansion of the Teshekpuk Lake SA. This could cause issues for production of stranded resources that could be connected to a Chukchi Sea pipeline. The stips and ROPS provide adaptive management protections – an outright prohibition is too extreme.

#: 40, Chap: 2, Sec: 2.3.3, Page 22
DEIS Text / Statement
The alternative would create a 107,000-acre Peard Bay Special Area to protect haul-out areas and nearshore waters for marine mammals and a high use staging and migration area for shorebirds and waterbirds. It would enlarge the Teshekpuk Lake Special Area by approximately 120,000 acres and the Utukok River Uplands Special Area by approximately 470,000 to more fully encompass caribou calving habitat. It would modify the purposes of the Teshekpuk Lake Special Area and the Colville River Special Area in the same way as Alternative B. Alternative C also would recommend the Colville River (where BLM manages the river bed and both banks in and above T6S, R17W, U.M.), the Utukok River (within the NPR-A), and the Kiligwa River for designation by Congress as additions to the National Wild and Scenic Rivers System with scenic status. To further enhance the potential for oil and gas development, the BLM would, as funds are available, develop a plan of exploration and evaluation of gravel sources suitable for construction of roads and pads necessary for development. Such exploration and evaluation may be conducted in cooperation with other agencies or with private industry.
Shell Issue / Comment
[48.027] No reasons are provided for why expansion of the Teshekpuk Lake Special Area is warranted. The herd is flourishing. The Special Area should not be expanded.

#: 41, Chap: 2, Sec: 2.3.4, Page 23
DEIS Text / Statement
No expansion of SAs and no W&S River designations
Shell Issue / Comment
Shell agrees that these areas should not be expanded and support Alternative D.

#: 42, Chap: 2, Sec: Table 2-1, Page 24
DEIS Text / Statement
Land allocation
Lands that could be offered for O&G leasing Alternative A 13 million acres (57% of NPR-A subsurface available; 1.57 million deferred until 2014; 425,000 deferred until 2018)
Shell Issue / Comment
BLM should clearly define what is land for O&G leasing (extraction versus ancillary facilities, versus roads).

#: 43, Chap: 2, Sec: Table 2.2, Page 26
DEIS Text / Statement
Airboat use is permitted in Alternatives B, C, and D for subsistence use but prohibited for nonsubsistence use
Shell Issue / Comment
Use of airboats for non-subsistence use will be very limited and better regulated than subsistence uses. There is no enforcement ability for subsistence users. Airboats should be allowed for nonsubsistence users.

#: 44, Chap: 2, Sec: Table 2.2, Page 26
DEIS Text / Statement
Inventory of gravel sources
Shell Issue / Comment

We strongly support and encourage the inventory of gravel resources – it should be part of all Alternatives.

[48.028] #: 45, Chap: 2, Sec: Table 2.2, Page 26
DEIS Text / Statement
Public Health Consultation – all alternatives contain this language – "The BLM may also consult with other sources of recognized public health exercise"
Shell Issue / Comment
BLM should be more clear on who they would consult.

[48.029] #: 46, Chap: 2, Sec: 2.3.5, Page 28
DEIS Text / Statement
Stipulations are attached to the lease prior to issuance, as appropriate. As part of a lease contract, lease stipulations are specific to the lease. All oil and gas activity permits issued to a lessee will comply with the lease stipulations appropriate to the activity (e.g., exploratory drilling or production pad construction) under review. . . . For example, an applicant for a non-lease-related construction project would still have to meet the objectives included in Stipulation E-3 to protect free passage of marine and anadromous fish and protect subsistence use and access if such a provision was established as a permit condition, thus affecting design and placement of causeways, docks, and artificial islands.
Shell Issue / Comment
It is a misnomer to refer to these as lease stipulations if indeed they apply to all permitted activities.

[48.030] #: 47, Chap: 2, Sec: 2.3.5, Page 28
DEIS Text / Statement
Section on stipulation waivers includes this phrase "authorized officer considers such requirements are warranted to protect the land and resources pursuant to the BLM's responsibility under relevant laws and regulations"
Shell Issue / Comment
The language in this paragraph is not specific enough – more certainty needs to be provided in order to evaluate the impact on such things as proposed pipelines and to evaluate the Alternatives.

#: 48, Chap: 2, Sec: 2.3.5, Page 28
DEIS Text / Statement
Statement made: Special Area designation does not itself impede oil and gas development.
Special
Areas,
Shell Issue / Comment
Special Areas designation does impede oil and gas development when combined with the phrase ?This infrastructure would not be allowed, however, on lands where new non-subsistence infrastructure is prohibited.?

#: 67, Chap: 2, Sec: 2.4.6, Page 32
DEIS Text / Statement
2.4.6 Recommending Establishment of a National Wildlife Refuge in All or Part of NPR-A ... BLM has determined not to analyze in detail a separate alternative that would designate a wildlife refuge.
Shell Issue / Comment
We agree with this conclusion.

[48.031] #: 49, Chap: 2, Sec: 2.4.7, Page 39
DEIS Text / Statement
The purposes of this plan include providing for an opportunity, subject to appropriate conditions, to construct necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System. Development of Chukchi Sea oil

and gas resources, considered among the most promising in the Nation, would not only help to meet the Nation's energy needs, but oil and gas infrastructure across the NPR-A would make it more economical to develop the NPR-A's oil and gas resources. An alternative that would not provide for such infrastructure would be inconsistent with the purpose of this plan and, therefore, outside its scope.
Shell Issue / Comment
The rest of this document needs to be consistent with this section, but add the phrase 'commercially viable' in front of 'necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System'

[48.032] #: 50, Chap: 2, Sec: 2.8, Page 39
DEIS Text / Statement
BMP-A3
In addition contingency plans related to facilities developed for oil production shall include requirements to: a. Provide refresher spill response training to North Slope Borough and local community spill-response teams on a yearly basis. b. Plan and conduct a major spill-response field deployment drill annually.
Shell Issue / Comment
It is not clear whether these contingency plan training and drill requirements apply to a pipeline from the OCS. Are they needed in addition to drill requirements in ODPCPs?

#: 51, Chap: 2, Sec: 2.8, Page 39
DEIS Text / Statement
BMP-A3
In addition contingency plans related to facilities developed for oil production shall include requirements to: c. Prior to production and as required by law, develop spill prevention and response contingency plans and participate in development and maintenance of the North Slope Subarea Contingency Plan for Oil and Hazardous Substances Discharges/Releases for the National Petroleum Reserve-Alaska operating area. **[Preamble 48.033]** Planning shall include development and funding of detailed (e.g., 1:26,000 scale) environmental sensitivity index maps for the lessee's operating area and areas outside the lessee's operating area that could be affected by their activities. (The specific area to be mapped shall be defined in the lease agreement and approved by the authorized officer in consultation with appropriate resource agencies.)
Shell Issue / Comment

[48.033] It is not clear whether these mapping requirements apply to a pipeline from the OCS. Would these requirements apply to a ROW pipeline that is not associated with production in the NPRA?

#: 52, Chap: 2- Appendix A, Sec: A-11, Page 46
DEIS Text / Statement
Ensure that permitted activities do not create human health risks through contamination of subsistence foods.
Shell Issue / Comment
The establishment of a baseline for levels of contaminants in subsistence food prior to a development and monitoring of those levels during development has complications. It will be very difficult to determine what operator might be responsible for contaminants because the subsistence species generally exist over large areas.

#: 53, Chap: Appensix A, Sec: C-2, Page 49,50
DEIS Text / Statement
Section f in all alternatives and Colville River
Special Management Plan Protection 7.
Shell Issue / Comment
All of this language specific to the Colville River Special Area is inappropriate since the reason

the area was designated as "special" no longer exists. The arctic peregrine falcon is no longer listed.

#: 54, Chap: Appendix A, Sec: E-1, Page 52
Shell Issue / Comment
[48.034] The language from Northwest EIS which excludes intercommunity or other permanent roads should be included in Alternatives B,C & D.

[48.035] #: 5, Chap: 2, Sec: 2.8, Page 53
DEIS Text / Statement
E-2 Lease Stipulation
Permanent oil and gas facilities, including roads, airstrips, and pipelines, are prohibited upon or within 500 feet as measured from the ordinary high watermark of fish-bearing water bodies. Essential pipeline and road crossings will be permitted on a case-by-case basis.
Shell Issue / Comment
Pipelines should not be included with these other facilities as they can be constructed with little or no effect on the stream and must cross many streams as they transport oil or gas long distances from west to east across a region with many north flowing streams. It is unclear what qualifies a pipeline as essential. This should be defined.

[48.036] #: 56, Chap: 2, Sec: 2.8, Page 56
DEIS Text / Statement
E-7 Best Management Practice
d. Above-ground pipelines shall have a non-reflective finish.
Shell Issue / Comment
Most coating and insulation material used outside of pipelines are non-reflective by nature, but there will be instances that we use straps and connections that are made out of aluminum or similar reflective metal/material, minimally used on the surface. This applies to the pipeline facilities equipment as well – such as valve stations and tanks for storage that are part of the pipeline systems. The BMP should apply only to the pipe / pipe insulation / covering itself.

#: 57, Chap: 2, Sec: 2.8, Page 58
DEIS Text / Statement
E-11 Best Management Practice
Protections for Birds
a. To reduce the possibility of birds colliding with above-ground utility lines (power and communication), such lines shall either be buried in access roads or suspended on vertical support members except in rare cases, which are to be few in number and limited in extent. Exceptions are limited to the following situations: 1. Overhead power or communication lines may be allowed when located entirely within the boundaries of a facility pad; 2. Overhead power or communication lines may be allowed when engineering constraints at the specific and limited location make it infeasible to bury or connect the lines to a vertical support member; or 3. Overhead power or communication lines may be allowed in situations when human safety would be compromised by other methods. b. To reduce the likelihood of birds colliding with communication towers, towers should be located, to the extent practicable, on existing pads and as close as possible to buildings or other structures, and on the east or west side of buildings or other structures if possible. Support wires associated with communication towers, radio antennas, and other similar facilities, should be avoided to the extent practicable. If support wires are necessary, they should be clearly marked along their entire length to improve visibility to low-flying birds. Such markings shall be developed through consultation with the USFWS.
Shell Issue / Comment
[48.037] The BMP requirements for the Protection of Birds appear to be identical to those within the same BMP as Special Conditions for Spectacled and Steller's Eider Habitats. It just complicates compliance when there are redundancies – unless there is a difference one set of these requirements should be deleted.

[48.038] #: 58, Chap: 2, Sec: 2.8, Page 63
DEIS Text / Statement
E-19 Best Management Practice
Objective: Provide information to be used in monitoring and assessing wildlife movements during and after construction. Requirement/Standard: A representation, in the form of ArcGIS-compatible shape-files, of all new infrastructure construction shall be provided to the authorized officer. During the planning and permitting phase, shape-files representing proposed locations shall be provided. Within 6 months of construction completion, shape-files (within GPS accuracy) of all new infrastructure shall be provided. Infrastructure includes all gravel roads and pads, facilities built on pads, pipelines and independently constructed powerlines (as opposed to those incorporated in pipeline design).
Shell Issue / Comment
It may be difficult or impossible to provide final as-builts within 6 months – this should be extended to 12 months.

[48.039] #: 59, Chap: 2, Sec: 2.8, Page 65
DEIS Text / Statement
F-1 Best Management Practice
f. Aircraft used for permitted activities shall maintain an altitude of at least 2,000 feet above ground level (except for takeoffs and landings) over the Utukok River Uplands Special Area from May 20 through August 20, unless doing so would endanger human life or violate safe flying practices. (Note: The boundary of the Utukok River Uplands Special Area differs among Alternatives B through D. See Maps 2-2, 2-3, and 2-4.)
Shell Issue / Comment
The prescribed 2,000 ft minimum altitude above the ceiling on most days and has not been identified as a critical height in impact assessment studies. It should be reduced to 1,500 ft. Wording should be changed to reflect manned aircraft. Operators need flexibility to utilize new technologies, such as unmanned aerial systems (drones) to monitor the pipeline. These may need to fly at a lower elevation to be effective. No minimum elevation should be designated at this time for unmanned aerial systems.

[48.040] #: 60, Chap: 2, Sec: 2.8, Page 73
DEIS Text / Statement
K-1 Lease Stipulation – Rivers
Permanent oil and gas facilities, including gravel pads, roads, airstrips, and pipelines, are prohibited in the streambed and adjacent to the rivers listed below at the distances identified. (Gravel mines may be located within the active floodplain consistent with Best Management Practice E-8). On a case-by case basis, and in consultation with federal, State, and North Slope Borough regulatory and resource agencies (as appropriate, based on agency legal authority and jurisdictional responsibility), essential pipeline and road crossings to the main channel will be permitted through setback areas. The above setbacks may not be practical within river deltas. In these situations, permanent facilities shall be designed to withstand a 200-year flood event. In the below list, if no upper limit for the setback is indicated, the setback extends to the head of the stream as identified in the National Hydrography Dataset.
Shell Issue / Comment
Pipelines should not be included with these other facilities as they can be constructed with little or no effect on the stream and must cross many streams as they transport oil or gas long distances from west to east across a region with many north flowing streams.

#: 61, Chap: 2, Sec: 2.8, Page 73
DEIS Text / Statement
K-8b Best Management Practice – Kasegaluk
Lagoon Special Area
Note: The Kasegaluk Lagoon and an area 1 mile inland from the lagoon (i.e., lands identified as the Kasegaluk Lagoon Special Area in a Federal Register notice of February 24, 2005) is on lands that in Alternatives B and C would be both unavailable for leasing and on which no

nonsubsistence permanent infrastructure would be allowed except to develop valid existing NPR-A oil and gas leases. Therefore, under Alternatives B and C, K-8b would be a best management practice whose provisions would be applicable only to off-lease activities to develop valid existing NPR-A oil and gas leases outside of the Kasegaluk Lagoon and its 1-mile setback. Objective: Protect the habitat of the fish, waterfowl, and terrestrial and marine wildlife resources of Kasegaluk Lagoon, and protect subsistence uses and public access to and through Kasegaluk Lagoon for current and future generations of North Slope residents.
[48.041] Requirement/Standard: No permanent oil and gas surface facilities are permitted in the Kasegaluk Lagoon and an area one mile inland from the lagoon.
Shell Issue / Comment
Pipelines (and appurtenances) should be allowed in this area with engineering considerations such as horizontal directional drills (HDDs). The Special Area blocks a large portion of the coast between OCS leases and TAPS. Regarding the requirement of no surface facilities, Shell suggests that the phrase "except pipelines" be added or state that buried pipelines are not considered surface facilities.

#: 62, Chap: 2 Table 2-3, Sec: H-2, Page 69
DEIS Text / Statement
H-2 Best Management Practice
Objective: Prevent unreasonable conflicts between subsistence activities and geophysical (seismic) exploration.
Requirement/Standard: In addition to the consultation process described in Best Management Practice H-1 for permitted activities, before applying for permits to conduct geophysical (seismic) exploration applicants shall notify the local search and rescue organizations of current and recent seismic surveys. For the purpose of this standard, a potentially affected cabin/campsite is defined as any camp or campsite within the boundary of the area subject to proposed geophysical exploration and/or within 1 mile of actual or planned travel routes used to supply the seismic operations while it is in operation. **[48.042]** a. Because of the large land area covered by typical geophysical operations and the potential to impact a large number of subsistence users during the exploration season, the permittee/operator will notify all potentially affected long-term cabin and camp users. b. The official recognized list of cabin and campsite users is the North Slope Borough's most current inventory of cabins and campsites.
Shell Issue / Comment The list of cabins may not be accurate. The BMP applies only to long-term cabin and camp users. Does the list identify long term versus short term? The BMP should be modified or deleted.

#: 63, Chap: 2 Table 2-3, Sec: K-1, Page 72-77
DEIS Text / Statement
K-1 Lease Stipulation/Best Management Practice – Rivers
Requirement/Standard: Permanent oil and gas facilities, including gravel pads, roads, airstrips, and pipelines, are prohibited in the streambed and adjacent to the rivers listed below at the distances identified. (Gravel mines may be located within the active floodplain consistent with Best Management Practice E-8). On a case-by case basis, and in consultation with federal, State, and North Slope Borough regulatory and resource agencies (as appropriate, based on agency legal authority and jurisdictional responsibility), essential pipeline and road crossings to the main channel will be permitted through setback areas. The above setbacks may not be practical within river deltas. In these situations, permanent facilities shall be designed to withstand a 200-year flood event. In the below list, if no upper limit for the setback is indicated, the setback extends to the head of the stream as identified in the National Hydrography Dataset.
Shell Issue / Comment
Alternatives B and C which provide for establishment of Wild and Scenic Rivers and the associated setbacks on all these rivers put a great deal of acreage off limits. This is not in accordance with the purpose of the NPR-A.

#: 64, Chap: 2 Table 2-3, Sec: K-2, Page 77
DEIS Text / Statement
Alternative B
Shell Issue / Comment
Many of these lakes would be unavailable for leasing and in areas where non-subsistence permanent construction is prohibited. Not in accordance with NPR-A

#: 65, Chap: 2 Table 2-3, Sec: K-3a, Page 78
DEIS Text / Statement
Alternatives B & C
Shell Issue / Comment
The expansion of the Teshekpuk Lake Special Area in these two alternatives is not warranted and places too much of the NPR-A off limits. The Special Area should not be expanded. The expansion of the Teshekpuk Lake Special Area and the prohibition of non-subsistence infrastructure are not in accordance with the purpose of the Petroleum Reserve.

#: 66, Chap: 2 Table 2-3, Sec: K-4b, Page 84-85
DEIS Text / Statement
Alternative B
Shell Issue / Comment
The expansion of the Teshekpuk Lake Special Area in these two alternatives is not warranted and places too much of the NPR-A off limits. The Special Area should not be expanded. The expansion of the Teshekpuk Lake Special Area and the prohibition of non-subsistence infrastructure are not in accordance with the purpose of the Petroleum Reserve.

#: 67, Chap: 2 Table 2-3, Sec: K-5a, Page 85-89
DEIS Text / Statement
Alternatives B&C
"The lessee shall design and implement and report a study of caribou movement unless an acceptable study(s) specific to the Teshekpuk Caribou Herd has been completed within the last 10 years. The study shall include a minimum of four years of current data on the Teshekpuk Caribou Herd movements and the study design shall be approved by the authorized officer in consultation with the appropriate federal, State, and North Slope Borough wildlife and resource agencies."
Shell Issue / Comment
The expansion of the Teshekpuk Lake Special Area in these two alternatives is not warranted and places too much of the NPR-A off limits. The Special Area should not be expanded. The expansion of the Teshekpuk Lake Special Area and the prohibition of non-subsistence infrastructure are not in accordance with the purpose of the Petroleum Reserve. **[48.043] What is the scientific basis for a 4 year caribou study, when 3 years might be sufficient. This could delay development if critical path. Same comment for western arctic herd area.**

#: 68, Chap: 2 Table 2-3, Sec: K-8a, Page 92
DEIS Text / Statement
Alternative B
Shell Issue / Comment
Alternative B does not allow for any leasing or non-subsistence infrastructure within the Pik Dunes. This restriction renders Alternative B unacceptable.

#: 69, Chap: 2 Table 2-3, Sec: K-8b, Page 92
DEIS Text / Statement
Alternatives B & C
Shell Issue / Comment
Alternatives B and C expand the existing Kasegaluk Lagoon Special Area. This is not in accordance with the NPRPA. Alternative D preferable.

#: 70, Chap: 2 Table 2-3, Sec: K-9, Page 93
DEIS Text / Statement
Alternative B
Shell Issue / Comment
Alternative B places these lands as unavailable for leasing and prohibits non-subsistence infrastructure. Alternative B is unacceptable and Alternative D is preferred.

#: 71, Chap: 2 table 2-3, Sec: K-11, Page 94
DEIS Text / Statement
K-11 Lease Stipulation – Lease Tracts A-G
Objective: To protect key surface resources and subsistence resources/activities resulting from permanent oil and gas development and associated activities.
Requirement Standard: **[48.044]** Permanent surface disturbance resulting from oil and gas activities is limited to 300 acres within the following described lease tracts (Maps 2-3 and 2-4); this does not include surface disturbance activities from pipeline construction. Existing gravel pads within these tracts would not count against the 300-acre limit. A pipeline will be considered for development of one or more of these tracts after a workshop is convened to identify the best corridor for pipeline construction in efforts to minimize impacts to wildlife and subsistence resources.
Shell Issue / Comment
This limit of 300 acres for permanent construction is very hard to work with and could result in no access to stranded resources. Does the acreage limit apply to pipelines? If so, what parts of the pipeline system would count against the 300 acres?

#: 72, Chap: 4, Sec: 4.2.1, Page 40
DEIS Text / Statement
3. Future National Petroleum Reserve-Alaska
Pipelines
Shell Issue / Comment
There is no mention or consideration of future pipelines to transport oil/gas from OCS leases in the Chukchi Sea to TAPS.

#: 73, Chap: 4, Sec: 4.3.10.5, Page 222
DEIS Text / Statement
g. **[48.045]** Aircraft traveling along the coast and shore fast ice zone shall maintain a minimum altitude of 3,000 ft. and a buffer of 1 mile from aggregations of seals unless doing so would endanger human life or violate safe flying practices.
Shell Issue / Comment
Exceptions are needed for wildlife surveys and marine mammal observer flights – surveys cannot be flown at this altitude and result in useable data. Also exceptions for unmanned aerial systems (UAS) and lighter than air craft, as sound levels are much lower.

#: 74, Chap: 4, Sec: 4.7, Page all
DEIS Text / Statement
Cumulative impact analysis.
Shell Issue / Comment
[48.046] BLM's environmental impact analysis in Chapter 4 should be revisited and updated to consider the multiple hypothetical corridor alternatives for a pipeline transporting oil and gas from the Chukchi Sea to the TAPS pipeline, as well as the environmental impacts associated with that pipeline and all the related infrastructure, including the construction and maintenance of such a pipeline and related infrastructure. This analysis should be conducted for each of the hypothetical pipeline corridor alternatives. Further, the cumulative effects section in the Draft IAP/EIS (4.7) should be reconsidered and updated, if necessary, to fully discuss this proposed pipeline activity, any additional reasonably foreseeable future oil and gas activities that may occur as a result of this pipeline, and other issues not adequately considered in the cumulative impacts section of the current draft.

#: 75, Chap: Appendix A, Sec: ANILCA A.2.2.4, Page 17
DEIS Text / Statement
Findings
Shell Issue / Comment
Given that Alternative A has proven to be minimally impactive to subsistence activities, the level of additional protection required in Alternative B is unnecessary and out of conformance to the purposes of the NPRPA.

#: 76, Chap: Appendix A, Sec: ANILCA A.2.4.1, Page 20
DEIS Text / Statement
Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs "The impacts of Alternative D would therefore be greater than those for Alternatives A, B and C. Although many impacts would be localized, of short duration, and not significant at the population level for most species, the overall potential for numerous disturbances to critical subsistence species and for conflicts over access to subsistence areas under Alternative D support the conclusion that subsistence uses may be significantly affected."
Shell Issue / Comment
Specific to the last sentence – the first part of the sentence does not lead to the subsequent conclusion. If the impacts are of short duration, and not significant how does one conclude that resources may be significantly affected?

#: 77, Chap: Appendix A, Sec: ANILCA A.2.4.1, Page 21
DEIS Text / Statement
Birds
Shell Issue / Comment
This section leads to the conclusion that Alternative D will be horrible for birds. It leaves the impression that no protections will be in place in Teshekpuk Lake but the prohibition on leasing is in place from previous EISs until that prohibition expires.

#: 78, Chap: Appendix A, Sec: ANILCA A.2.4.1, Page 22
DEIS Text / Statement
Fish
Shell Issue / Comment
The expanded section on fish leads to the conclusion that Alternative D is worse for subsistence than is supported by fact. The Petroleum Reserve is not a wildlife refuge.

#: 79, Chap: Appendix A, Sec: ANILCA A.2.4.1, Page 22
DEIS Text / Statement
Caribou
Shell Issue / Comment
[48.047] The conclusion that development infrastructure will negatively impact caribou herds is not supported by fact. The populations of caribou on the north slope have not been negatively impacted by current infrastructure. The conclusions contained here are inflammatory.

#: 80, Chap: Appendix A, Sec: ANILCA A.2.4.2, Page 24
DEIS Text / Statement
Last paragraph of that section
Shell Issue / Comment
[48.048] The statement that proposed stipulations and BMPs can effectively mitigate most potential impacts from oil and gas activity does not support the next sentence that the amount of disturbance to subsistence would be significant.

#: 81, Chap: Appendix A, Sec: ANILCA A.2.4.2, Page 24
DEIS Text / Statement
Findings
Shell Issue / Comment

The conclusion presented here is the worst case scenario and is highly speculative and inflammatory. Conclusions should be altered.

#: 82, Chap: Appendix A, Sec: ANILCA A.2.4.1, Page 21
DEIS Text / Statement
Findings
Shell Issue / Comment
[48.049] The conclusion associated with cumulative impacts is the worst possible scenario. None of the discussion in this entire section on subsistence speaks to the fact that subsistence activities are currently reliant on a cash economy that is very dependent upon development. All the services that residents of the North Slope enjoy (schools, health, emergency services) are supported by taxing oil infrastructure. Limiting oil and gas development has a significant impact on the ability of residents to continue a subsistence lifestyle.

Attachment B

Activities and Facilities Required to Construct, Maintain and Operate an Oil or Gas Pipeline across the NPR-A

Submitted as part of Shell Exploration and Production's (Shell's) Comments on the Bureau of Land Management's (BLM's) Draft Integrated Activity Plan / Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve - Alaska

The optimal pipeline corridor connecting potential discoveries in the Chukchi OCS to TAPS will require balancing a number of factors, for example but in no particular order:

1. Traditional knowledge
2. Subsistence activities
3. Land ownership
4. Stakeholder input
5. Hydrology
6. Threatened and Endangered species / critical habitat
7. Potential onshore development locations
8. Existing or planned infrastructure
9. Cost
10. Environmental sensitivity
11. Ability to respond in the low chance there is an oil spill
12. Access, such as roads for construction and/or operations
13. Geotechnical (soil, permafrost, etc)
14. Shore crossing location
15. Elevation
16. Gravel & water sources

The construction and operation of an onshore oil or gas pipeline has the following three distinct phases:

1- Field surveys and data gathering activities
2- Construction and commissioning
3- Operations and maintenance

Field surveys and data gathering activities: These activities would be carried out in the years before the pipeline design and corridor selection is finalized. Typical surveys include traditional knowledge, location and timing of subsistence activities, land ownership, hydrology, Threatened and Endangered species / critical habitat, potential onshore hydrocarbon development locations, location of existing or planned infrastructure, environmental sensitivity, geotechnical (soil, permafrost, etc.), shore crossing locations, elevation and gravel and water sources.

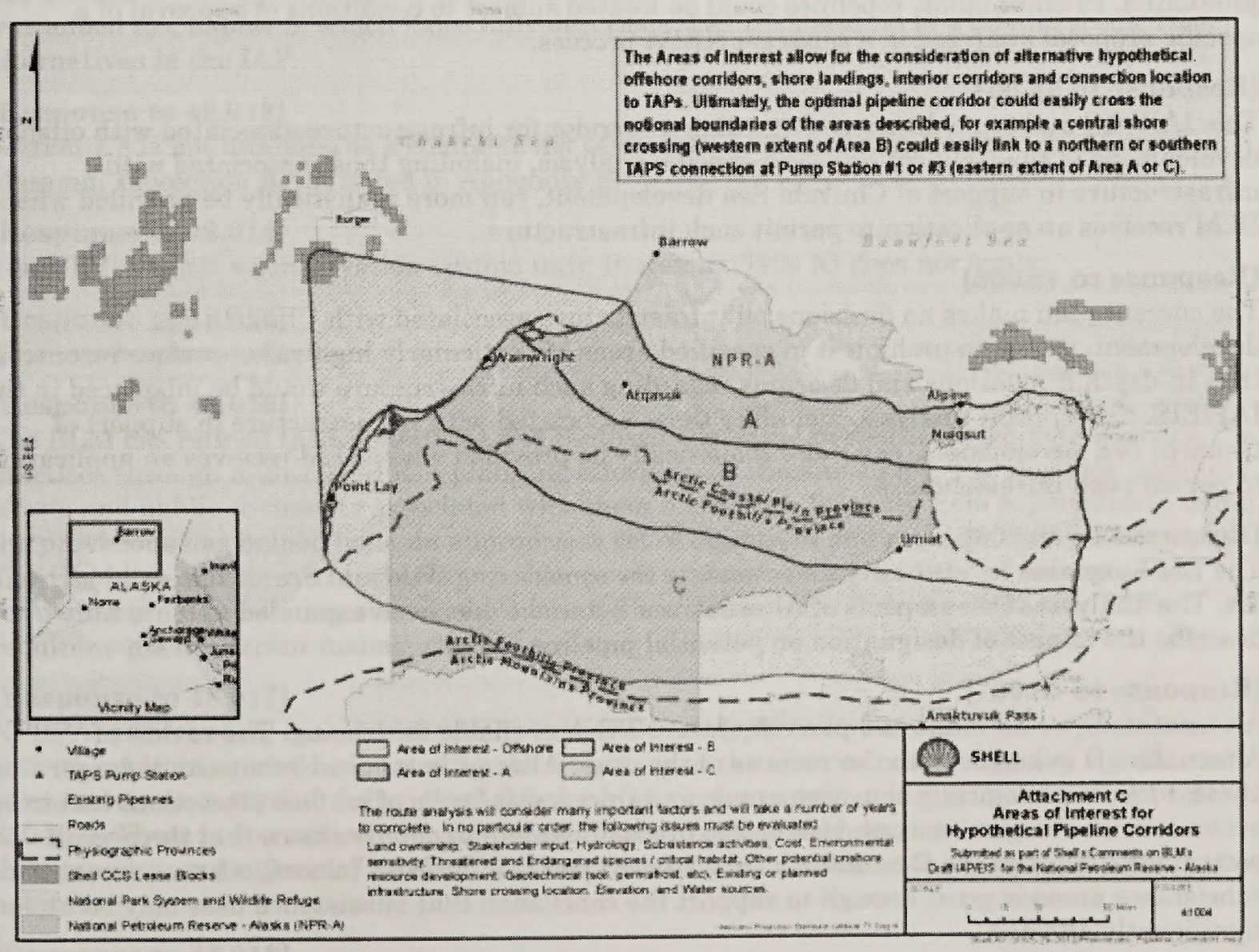
Construction and commissioning: Most activities and facilities associated with the pipeline construction, will only have a temporary presence. Some of these activities will also occur at a

distance from the pipeline corridor, such as sourcing water and gravel, while others will take place within the permitted right of way, e.g., installing pipelines buried or above ground with vertical support structures, pump stations and valve stations.

As part of the temporary activities associated with pipeline construction, it is expected that the pipe, structural supports and associated mechanical and facility equipment will be transported to the region by vessel and then on to designated locations on land (pipe yards) that are as close as reasonably possible to the construction site where the pipe will be prepared (coated, welded, stored) for installation. The crews involved with this phase will be housed at temporary camps and accommodations along the pipeline corridor. Construction and maintenance of a pipeline more than 40% the length of TAPS in such a remote area without having partial or complete permanent road access is likely to be impracticable. Air transportation, including the use of airplanes and helicopters with airstrips and landing/take-off pads will also be required. Another example of an activity that requires temporary facilities and construction equipment is the installation of buried or bridge pipeline river crossings.

Operations and maintenance: Features that will remain in the pipeline corridor during the operational phase include the pipeline and vertical support structures, pump stations with living quarters, valve stations at regular intervals, maintenance / response access roads, airstrips and helicopter landing/takeoff pads. Structures at river crossings will depend on the size of the river and other aspects of the crossing location. Infrastructure for access to sources of power/fuel to run the pipeline facilities will also be required.

Any definition of a pipeline should include the activities and facilities described above in the construction and commissioning and the operations and maintenance descriptions.


The Areas of Interest allow for the consideration of alternative hypothetical offshore corridors, shore landings, interior corridors and connection location to TAPs. Ultimately, the optimal pipeline corridor could easily cross the notional boundaries of the areas described, for example a central shore crossing (western extent of Area B) could easily link to a northern or southern TAPS connection at Pump Station #1 or #3 (eastern extent of Area A or C).
Barrow
Wainwright
Atqasuk
NPR-A
A
B
C
Nuiqsut
Point Lay
Umiat
Arctic Coastal Plain Province
Arctic Foothills Province
Arctic Foothills Province
Arctic Mountains & Foothills Province
Anaktuvuk Pass
Utqiagvik
ALASKA
Nome
Fairbanks
Vicinity Map
Village
TAPS Pump Station
Existing Pipelines
Roads
Physiographic Provinces
Shell OCS Lease Blocks
National Park System and Wildlife Refuge
National Petroleum Reserve - Alaska (NPR-A)
Area of Interest - Offshore
Area of Interest - A
Area of Interest - B
Area of Interest - C
The route analysis will consider many important factors and will take a number of years to complete. In no particular order, the following issues must be evaluated:
Land ownership, Stakeholder input, Hydrology, Subsistence activities, Cost, Environmental sensitivity, Threatened and Endangered species / critical habitat, Other potential onshore resource development, Geotechnical (soil, permafrost, etc), Existing or planned infrastructure, Shore crossing location, Elevation, and Water sources.
SHELL
Attachment C
Areas of Interest for
Hypothetical Pipeline Corridors
Submitted as part of Shell's Comments on BLM's
Draft IAP/EIS for the National Petroleum Reserve - Alaska
1:1004

[Response to 48.001]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope. However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. The cumulative impact analysis in the IAP/EIS provides suitable specificity of analysis. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure.

[Response to 48.002]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope. However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. The cumulative impact analysis in the IAP/EIS provides suitable specificity of analysis. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure.

[Response to 48.003]
The various alternative descriptions and accompanying maps make it clear that pipelines are excluded from all areas in which new non-subsistence permanent infrastructure would be prohibited. In other lands, pipelines could be located subject to conditions of approval of a specific proposal analyzed in a separate NEPA process.

[Response to 48.004]
This IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure.

[Response to 48.005]
The current plan makes no decisions on infrastructure associated with Chukchi Sea development, except to prohibit it in specified areas of particularly high value surface resources, thus in-depth discussions and decisions regarding such infrastructure would be misplaced in the IAP/EIS. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure.

[Response to 48.006]
The BLM explains its authority and mandate for considering Wild and Scenic Rivers in section 1.4. The analysis of the impacts of Alternatives B-1 and C has been expanded to more fully describe the impact of designation on potential pipeline routes.

[Response to 48.007]
Alternative D would make 100 percent of the NPR-A available for leasing. The review of Alternative D is longer than the reviews of the other Alternatives because impacts to larger areas, to more ecologically sensitive areas, and from lower levels of surface protections had to be evaluated. The review was not designed to mislead readers; it clearly states that the overall potential for Alternative D to disturb subsistence species and result in conflicts over access to subsistence areas is great enough to support the conclusion that subsistence uses may be significantly affected.

[Response to 48.008]
The analysis of the impacts of Alternatives B-1 and C has been expanded to more fully describe the impact of suitability determinations or designation on potential pipeline routes.

[Response to 48.009]
Chapter 4, Section title "Activities Not Associated With Oil and Gas Exploration and Development" has been modified to include this activity in the impact analysis.

[Response to 48.010]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope.

However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. It properly describes the development that may be associated with such infrastructure in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development" and appropriate analysis of associated cumulative impacts is provided in Chapter 4, Section title "Cumulative Effects on the Environment."

[Response to 48.011]
The BLM considers that the cooperating agencies for this IAP/EIS offer extensive and appropriate expertise.

[Response to 48.012]
See section 1.5 for a discussion of the mandates of the NPRPA. Also, reference to the NPRPA was added to Chapter 3, which more fully describes the consideration of wild and scenic river alternatives in the IAP.

[Response to 48.013]
Section 1.8 is not intended as a complete list of relevant laws and regulations. The Marine Mammal Protection Act is noted in Appendix B.

[Response to 48.014]
The NPR-A is not a conservation system unit; therefore, Title XI does not apply.

[Response to 48.015]
This text has been edited.

[Response to 48.016]
The BLM has refined the stipulations and required operating procedures/best management practices through multiple NPR-A planning efforts since the late 1990s. The repeated planning efforts and public comments associated with them along with learning from experience in using the provisions has helped hone an appropriate set of objectives and requirements/standards. The BLM has entertained and presented for public comment some additional measures and refinements of the existing ones in the current plan. Alternative D does relax some requirements in current management.

[Response to 48.017]
NPRPA, as amended, contains special provisions that apply to any exploration or production activities within areas "designated by the Secretary of the Interior containing any significant subsistence, recreational, fish and wildlife, or historical or scenic value" (P.L. 96-514, 42 USC § 6504(a)). There is no requirement that special areas protect only species designated as threatened or endangered. The Colville River Special Area continues to provide valuable raptor habitat.

[Response to 48.018]
NPRPA, as amended, contains special provisions that apply to any exploration or production activities within areas "designated by the Secretary of the Interior containing any significant

subsistence, recreational, fish and wildlife, or historical or scenic value" (P.L. 96-514, 42 USC § 6504(a)). There is no requirement that special areas protect only species designated as threatened or endangered. The Utukok River Uplands Special Area continues to provide valuable calving and insect-relief habitat for the Western Arctic Herd. This herd is an invaluable subsistence resource to villages both within and outside of the NPR-A.

[Response to 48.019]
A purpose of this IAP/EIS is to ensure that the BLM's land management will provide the opportunity, subject to appropriate conditions developed through a NEPA process, to construct pipelines and other necessary onshore infrastructure to bring oil and gas resources from leases in the Chukchi Sea to the Trans-Alaska Pipeline System or a future gas pipeline from the North Slope.

However, this IAP/EIS makes no decisions regarding a corridor for infrastructure associated with offshore development in the Chukchi Sea. It properly describes the development that may be associated with such infrastructure in Chapter 4, Section title "Reasonably Foreseeable Future Exploration and Development" and appropriate analysis of associated cumulative impacts is provided in Chapter 4, Section title "Cumulative Effects on the Environment."

[Response to 48.020]
The IAP/EIS has a range of alternatives. All, including the preferred alternative, offer greater opportunity for infrastructure for offshore development.

[Response to 48.021]
See section 1.5 for a discussion of the mandates of the NPRPA. Also, reference to the NPRPA was added to Chapter 3, which more fully describes the consideration of Wild and Scenic River alternatives in the IAP.

[Response to 48.022]
The Draft IAP/EIS's Alternative B would expand the Special Area to include much of the drainage of the Kasegaluk Lagoon. The designation would highlight the need to protect waterbird and shorebird habitats in the area.

[Response to 48.023]
Subsurface pipelines through Kasegaluk Lagoon and Peard Bay would be allowed under multiple alternatives in the range of alternatives, including the preferred alternative.

[Response to 48.024]
There are areas under some alternatives in which infrastructure in support of Chukchi Sea development would not be allowed, but all alternatives provides opportunities for such infrastructure.

[Response to 48.025]
There are areas under some alternatives in which infrastructure in support of Chukchi Sea development would not be allowed, but all alternatives provides opportunities for such infrastructure.

[Response to 48.026]
Under some alternatives, pipelines could be permitted in lands that would be unavailable for leasing, though some lands that are unavailable in several alternatives would generally prohibit pipelines.

[Response to 48.027]
NPRPA, as amended, contains special provisions that apply to any exploration or production activities within areas "designated by the Secretary of the Interior containing any significant subsistence, recreational, fish and wildlife, or historical or scenic value" (P.L. 96-514, 42 USC § 6504(a)).

The purpose for the Teshekpuk Lake Special Area is found in 2.1.2. The Teshekpuk Lake Special Area was designated primarily to protect important nesting, staging, and molting

habitat for a large number of waterfowl. The fact that the Teshekpuk Lake Caribou Herd is flourishing does not mean that the Special Area need not be expanded.

[Response to 48.028]
The public health consultation statement is sufficiently clear. At a minimum the North Slope Borough Health Department and the Alaska Native Tribal Health Consortium and, in the case of the action alternatives, the Alaska Department of Health and Social Services are listed. There are other sources of public health expertise in multiple universities and professional organizations, and the sources of such expertise may evolve between the time of the signing of the Record of Decision for this plan and the time in which any future major development is proposed.

[Response to 48.029]
As a matter of convenience, the IAP/EIS terms these measures as stipulations. As explained in the referenced section, "applicants for BLM authorizations should understand that the objectives of stipulations are equally valid for analogous non-oil and gas" activities. The BLM would seek to meet those objectives through imposition of terms and conditions in the permitting process.

[Response to 48.030]
The quoted phrase refers to the authority and responsibility the authorized officer has as part of the permitting process. The current plan establishes performance-based stipulations and best management practices. The BLM considers performance-based stipulations and best management practices to be a strength of the IAP, allowing managers to practice adaptive management to ensure that the objectives identified in the plan are met. This allows the authorized officer the ability to tailor requirements to take account of our evolving understanding of the environment and changing technology and techniques.

[Response to 48.031]
It is implicit in the discussion of a project to bring Chukchi Sea oil and gas to market that no infrastructure would be built across NPR-A unless the entire project is commercially viable.

[Response to 48.032]
Best management practices shall be considered in the course of processing permit applications, including those related to offshore development.

[Response to 48.033]
The text has been modified to clarify the scope of the requirement.

[Response to 48.034]
No such roads are currently proposed or contemplated. If such a road is proposed, the BLM will consider its appropriateness in a NEPA process consistent with the purposes of NPR-A as established in the NPRPA.

[Response to 48.035]
The decision on what pipelines are essential to a proposed project will be made in the context of a site-specific proposal.

[Response to 48.036]
The authorized officer can consider exceptions if warranted at the time of application for a site-specific proposal.

[Response to 48.037]
The requirements for protection of birds does not require reporting of exceptions to the USFWS, while the protections for eiders does. Consequently, the BLM has determined not to merge the requirements.

[Response to 48.038]
The authorized officer may consider adjustments in the time schedule for specific projects during the processing of applications.

[Response to 48.039]
The 2,000-foot minimum altitude is a distance that has been accepted as appropriate for multiple plans over more than a decade. The BLM knows of no scientific rationale that supports lowering that required height. Nor does it know of any studies that indicate that impacts to caribou would be less for unmanned aircraft.

[Response to 48.040]
While pipeline construction would likely have less impact than road or gravel pad construction to riparian areas, impacts from construction could occur. Pipeline leaks also are of concern in riparian areas. That many streams may need to be crossed by an east-west pipeline is not a reason to provide protection to the potentially affected waterbodies.

[Response to 48.041]
The range of alternatives includes alternatives, including the preferred alternative, in which infrastructure for offshore development could occur.

[Response to 48.042]
The text of this best management practice has been edited to provide greater clarity.

[Response to 48.043]
Caribou herd movement and range use can vary substantially from year to year. Consequently, the BLM has determined that four years or more of data is an appropriate length of study to capture natural variation. Proponents of development should plan accordingly.

[Response to 48.044]
Stipulation K-11 has not been included in the preferred alternative.

[Response to 48.045]
Required operating procedure/best management practice F-1 provides an exception for wildlife surveys. The BLM knows of no scientific studies on the impacts of unmanned aerial systems on seals that would justify making an exception on these restrictions.

[Response to 48.046]
The cumulative impact analysis in the IAP/EIS provides suitable specificity of analysis. Site-specific analysis, including those associated with infrastructure in support of Chukchi Sea development, can more realistically be provided when BLM receives an application to permit such infrastructure.

[Response to 48.047]
The analysis states that there is, in general, a higher probability of Alternative D causing a population-level effect to caribou given the larger development scenario (60 percent more acres of habitat under long-term disturbance than the current situation). Studies have suggested that the functional habitat loss is greater than the actual development footprint. The published literature on this question is not in complete agreement therefore we cannot conclude that there will be no negative impacts on caribou.

[Response to 48.048]
The comment does not consider the entirety of the analysis for Alternative D. Protective measures can effectively mitigate most, but not all, impacts of development. The text states that "if the optimistic levels of development predicted for Alternative D occur, the amount of disturbance to subsistence NPR-A-wide would be significant." Subsistence users avoid infrastructure and, if 100 percent of the NPR-A were leased, the resultant amount of infrastructure would significantly impact subsistence even if populations levels remained stable and migration routes were not disturbed.

[Response to 48.049]
Economics are not discussed in this section because that is not the purpose of ANILCA subsistence evaluations. The details and benefits of the mixed cash economy are discussed in Vol. 1, Section 3.4.3: Subsistence; Section 3.4.4: Sociocultural Systems; and extensively (for all

Alternatives) in Vol. 2, Chap. 4, Sociocultural Systems, Oil and Gas Exploration and Development Activities: Effects on Social Health. It is also addressed in In Vol. 3, Chap. 4., Cumulative Effects, Environmental Justice, Contribution of the NPR-A IAP/EIS Alternative to Cumulative Effects. They are also addressed in Vol. 1, Section 3.4.11: Economy and subsequent Economy sections.

COMMUNICATION NUMBER 51
Andrew Hopson
Speaker at Anaktuvuk Pass meeting, May 22, 2012

My comment has a question concerning all the Alternatives A, B, C, D. **[51.001]** Being as involved as we are with BLM, because we're so close to the NPR-A region, with these different alternatives for leasing, why cannot we find a new way for us to receive negative impact funds? We've been affected by the NPR-A region for many, many years being so close. And we're always coming to your meetings when you guys come in. And as much participation we have with you guys, there has to be a way for you guys to find a way for us to receive impact funds. Because it affects our caribou migration, which we largely depend upon, and subsistence. More than 75 percent of our diet is subsistence all year round. And this has been a concern that's probably been brought up many times before. But we have to start receiving some kind of impact fund. I mean, I know we're not in the NPR-A, but we're just as affected as all the other communities within the NPR-A. There has to be something that we can make up or find possibly out there.

[Response to 51.001]
NPR-A Mitigation Impact Funds are managed by the State of Alaska and are outside the scope of this planning effort. However, the follow is some information that the community of Anaktuvuk Pass may find helpful.

The Alaska Division of Community and Regional Affairs handles the NPR-A Impact Mitigation Grant Program.

Several copies of the NPR-A Impact Mitigation Grant Program Report to the Alaska Legislature were distributed to Subsistence Advisory Panel members. The report includes the history of the program and a list of all the grantees, projects, and amounts granted since the program began receiving money. This report is also available on the ADCRA website[4].

Fifty percent of the money received through NPR-A leases is deposited into this impact mitigation grant. The communities that are eligible are municipalities that can clearly demonstrate that they are severely or adversely affected by oil and gas exploration activities within the NPR-A. This has historically meant those communities located within the NPR-A (Barrow, Atqasuk, Nuiqsut, and Wainwright).

Anaktuvuk Pass is also eligible because it was determined in 1987 that AKP's subsistence activities take place in the NPR-A, however it has never applied for a grant.

[4] http://commerce.alaska.gov/dca/pub/2011_Report_to_the_Legislature.pdf

COMMUNICATION NUMBER 52
Dorcas Hugo
Speaker at Anaktuvuk Pass meeting, May 22, 2012

My name is Dorcas Hugo, for the record. Lifelong resident. Lifelong resident of Anaktuvuk Pass. Born and raised here. And that those alternatives and stuff will hurt our caribou calving grounds and our subsistence way of life and our survival. And that's the survival of our future generations. We have to look toward our future, too. Because we are going to promote our future. We're -- some of us are in our 70s. And it's going to affect them, too. [52.001] And my comment is we see a lot of sports hunters, guide hunters coming and get caribou before we do in the fall migration. And my comment is you guys don't see us going down to the United States and catch your biggest cow or bull horns for our collections -- our collections. Look what sports hunters do. And that should be put under control. And that the herd will be affected. And I just wanted to support what all these people commented. We are going to be getting ready for the future, preparing our future generations to live off the land like our parents taught us to live off the land. Our grandparents taught us. Our great grandparents taught us. So it's like a seven-generation thing, from generation to generation to generation. And we want to continue that. And that's my comment. Thank you.

[Response to 52.001]
The BLM only permits commercial activities (i.e., guided hunting) in the NPR-A and does not regulate sport hunters who travel to the area of their own volition. Currently, the BLM has six commercial hunting guides under permit in the NPR-A. Anaktuvuk Pass, due to its location, is a stopover for many guides and sports hunters - many of whom do not hunt on BLM lands. These guides and their clients, as well as all visiting sport hunters, must follow all State and Federal hunting regulations set by the State of Alaska Board of Game and Federal Subsistence Management Board.

COMMUNICATION NUMBER 53
Esther Hugo
Speaker at Anaktuvuk Pass meeting, May 22, 2012

I'm a Council Member. I was currently the Mayor, but now I'm the Member of the Council, City of Anaktuvuk. And this thing that we got BLM proposing, this plan, we will be heavily impacted due to the fact that caribou's our livelihood. And we can repeat this over and over and over and over again till somebody hears us, because we depend on caribou. And all that land we were just seeing through the slides there, the caribou all in the NPR-A up there towards north, all the way, Barrow all the way to Wainwright, Atqasuk, it's a crisscross. It's like a spaghetti noodle. I mean, those caribou go all over. They make -- you know, they travel. And it will affect the migration of our caribou. And that's really important to us. And we're going to just keep saying that and keep fighting and have somebody hear us. **[53.001]** What will happen to my people because of our caribou not migrating and we don't have any caribou anymore? We'll be getting sick. Our old folks are right now, as I speak. We've lost a whole lot of them just the last ten years, lot of them cancer and lot of sickness. But without caribou, that's how we're going to be, me, my cousin, my age group. Because we live -- we live and we eat that. I do every day. I just got done putting away some meat. And I was sharing meat, too. Because I know right now, it's pretty hard to catch them. But it's going to be really hard for us, it's going to be a change. It's not going to be the way it used to. We're not going to see the migration of our caribou. We're going to lose a lot of our old folks, a lot of us. But what we want to do is to protect our way of life, and that's the caribou. That's the very main livelihood, our diet. And it's very, very emotional to talk about. All these things coming to us. And we can repeat ourselves over and over. It's the caribou. That's -- we don't want to go store and get all that hamburger, chicken, pork chops, T-bone steaks. Too expensive.

[Response to 53.001]

The BLM is mindful of Anaktuvuk Pass's unique dependence on caribou and is legally required to protect Nunamiut subsistence resources and access to those resources in the NPR-A. BLM is also aware that subsistence foods, and the entire subsistence system, are integral to Inupiaq health and well-being (see Volume 1, Chap. 3, Subsistence and Sociocultural Systems). Systematic and broad-based public health impact analyses have been part of the past two planning efforts for the NPR-A. These analyses include biomedical health outcomes as well as a description of environmental and social conditions that impact human health. These health analyses are in addition to the analyses on the cultural and nutritional importance of subsistence and the sharing system, on an extensive discussion of sociocultural systems among North Slope Inupiat, and an analysis of historic and current environmental justice issues on the North Slope.

COMMUNICATION NUMBER 54
Sollie Hugo
Speaker at Anaktuvuk Pass meeting, May 22, 2012

No matter what kind of alternative you want to choose, it's still going to affect us like these people commented on. . . . We have ties from Nuiqsut from -- I'm pretty sure they're opposing all this also. We have strong ties with them. And we have hundreds of years of history along that river.said, there's a lot of ancestral grounds there, like maybe burial grounds, campsites, ancient campsites where you'd get to Nigliq for the gatherings, the summer gatherings, and all western travels over to the Nigu River area, to the Etivluk River area, all those rivers. If those are affected, then we're affected. If there's one little thing affected in the north, it affects us all. The Western Arctic Herd, that would just eally affect us terribly if that just had some kind of a sudden halt because of exploration. Your grids on your sales leases along the Colville River, I would think that must be over – how many million acres? That's quite a lot. **[54.001]** And there's a lot of ecosystem there that you need to explore, like the floating ponds that are just grass and moss, floating moss islands. But you don't see them. They're there. It's a real delicate ecosystem. What you call shrubs, we call live plants. And some of them take 20 summers to mature. It's not like they can mature in a year or two. Because it's seasonal, they take a slow-growth period. You need to look at that, the lichens and all the things you're running over with your vehicles and your roads. And also the noise pollution, like you said, the pollution, the micro-bacterial pollution from the vehicles, the dust from the roads, the bridges you're going to span over the rivers -- excuse me -- all those are going to affect wildlife. It doesn't matter how well you try to put it and say: It's going to -- this alternative will have the least effect. Define "least effect" for me. If it affects what I consume and it lives up in that region and it's affected to go somewhere else, that's not least affected. That's like a major effect right there. That's like taking the whales away from the whalers, that kind of effect. I just wanted to comment on that. And it's -- we're in the crossroads here. And it's a crucial time for us. We're -- that's where we are. We're at the crossroads. It's decision time for you and for me. Thank you.

[54.002] On the ANILCA act, under Section 810, I think you have three requirements that you would have to satisfy; not one, not two, but three stipulations under Section 810, if I'm not wrong. How do you propose to explain that you've satisfied all three of those requirements under the ANILCA act Section 810? I'm just kind of curious. Because it also stated if you don't satisfy one of those statements, that you cannot go ahead and do your explorations in the area you're proposed to.

[Response to 54.001]
The IAP/EIS analyzes the impacts of off-road travel, ice roads and gravel roads on the plant communities of the NPR-A in the vegetation sections of Chapter 4.

[Response to 54.002]
An ANILCA 810 analysis must consider 3 factors (population decline, altered migration routes, and limited access) to determine whether the proposed action may result in significant impacts to subsistence. It must also include findings on 3 specific issues (the effect on subsistence uses, the availability of other lands for the purpose, and other alternatives that would reduce or eliminate the use of public lands needed for subsistence). The ANILCA analysis does this and finds that both Alternative D and the Cumulative Case may have a significant impact. A finding of significance does not mean that the action cannot go forward. It means that the impacts must be disclosed and that meetings must be held with affected communities in an effort to learn the best ways to mitigate the impacts.

COMMUNICATION NUMBER 55
Dave Harbour
Speaker at Anchorage meeting, May 24, 2012

I'm a former member of the Regulatory Commission of Alaska. I'm speaking as a 40-year private citizen this evening. The first point I'd like to make has to do with the mission of the Bureau of Land Management as husbanding the resources of the lands entrusted to it. And clearly,**[55.001]** the BLM has been given a mission, first almost 100 years ago when the Naval Petroleum Reserve was established, and then more recently, by ANILCA in 1980. And that's very specific. And it's to treat it as an oil-and-gas-producing area. So the default should be to do that, Mr. Kelly. And if there's anything that's missing from the plan, I would suggest strong emphasis to the default mission given to the BLM originally, and also over 30 years ago through congress, through the budget resolution that established ANILCA. As to -- you asked specifically for missing ingredients that ought to be considered going forward. In addition to being more advocative of your mission, **[55.002]** I would expect that you would include socioeconomic impacts more vigorously in the plan. For example, in the event the trans-Alaska pipeline, which is two thirds empty, continues to deplete for lack of oil, some of which could come from this area, then the people most immediately affected would be those on subsistence, who now depend to a large extent on state funding for various school and public safety and other programs. Secondly,**[55.003]** it's a well-known fact that while the USGS can make estimates as to oil and gas that might be in place, one never knows what oil and gas is in place until actual drilling occurs. And that should be clearly stated. When environmental advocates, for example, say there's so little oil projected in the area, therefore lock it all up, the adults within BLM should say: We know better. We know that it takes drilling in order to truly discover what is there. And this is a National Petroleum Reserve and drilling needs to happen. I would suggest that you subsume into the record the 20 volume bio- -- 40-volume biological report series submitted to the Bureau of Land Management through the BLM in 1975 and 1976 by the Alaskan Arctic Gas Pipeline Study Group, which did studies on -- some studies for caribou and studies of -- all kinds of studies for all the birds, all the mammals that have been mentioned tonight. **[55.004]** I would also suggest that you look into the history of the Prudhoe Bay Arctic Caribou Head which has more than quadrupled in size since the oil industry became active there and provided the protections that it does. The biggest mortality of young caribou calves is mosquitoes. And mom takes the kids up on the gravel pads to avoid the mosquitoes in the low-lying areas. Thank you for the time.

[Response to 55.001]
The IAP/EIS properly acknowledges and fulfills the BLM's responsibility for management of NPR-A. For a discussion of BLM's responsibilities consistent with law, see particularly sections 1.1 and 1.5.

[Response to 55.002]
Known impacts to the economy resulting from activities within the alternatives have been included in the plan. The Economy subsection of Chapter 3 has been changed to include information on the TAPS life, generally indicating that NPR-A oil resources are not adequate to change the continuing decline in a significant way under any alternative, and that the most immediately affected by TAPS' demise will be oil-field and pipeline employees, then an assortment of state and federal workers, with the state's Permanent Fund providing a financial cushion for state and local governments to continue to provide services such as those mentioned until state income or sales taxes can be enacted to provide those services.

[Response to 55.003]
In Chapter 4, Section title "Resource Potential and Petroleum-related Activities" the IAP/EIS acknowledges that there are many uncertainties associated with projecting future petroleum exploration and development.

To address these uncertainties, the BLM has made reasonable assumptions based on the 2011 USGS NPR-A economic assessment by Attanasi and Freeman, on its own knowledge of the largely undiscovered petroleum endowment of the planning area and current industry practice, and on professional judgment.

[Response to 55.004]
The IAP/EIS summarizes the known population history of the Central Arctic Herd which summers in and near the current oil fields. The IAP/EIS summarizes what is known from past experience regarding the impacts of oil development on caribou. In the NPR-A, the BLM will apply the best of the mitigation learned over the past four decades in the State oil fields.

COMMUNICATION NUMBER 56
Lorali Simon
Speaker at Anchorage meeting, May 24, 2012

I was going to say that Alternative D was D for "development." So thank you. But I do respectfully request that BLM adopt Alternative D as its Preferred Alternative which will open all of NPR-A subsurface to oil and gas leasing, and also includes mitigation measures to protect the surface resources. **[56.001]** Additionally, I would like to request that all of NPR-A be open to mineral entry as well as the industrial mineral and coal leasing. And I respectfully request that BLM make this request of congress. And finally, I just want to ask that BLM not shift land management of NPR-A from multiple use to conservation. Thank you.

[Response to 56.001]
Section 2.4.3 of the IAP/EIS, "Alternatives Considered but Eliminated from Detailed Analysis," addresses this issue. Mineral and coal would neither further oil and gas leasing nor protected surface values consistent with oil and gas exploration and development. Since it is incompatible with the purpose of NPR-A as set forth in the NPRPA, BLM will not request Congress to open NPR-A to mineral and coal leasing.

COMMUNICATION NUMBER 57
Mary Barr
Speaker at Anchorage meeting, May 24, 2012

The reason the NPR-A was created originally was to reserve a place for oil and gas development. Closing it to oil and gas development is just wrong, because it denies the very purpose the Reserve was created for. The only acceptable option is Option D. Allow the BLM to offer all the NPR-A lands for oil and gas leasing and protect the surface values through other methods.
[57.001] The alternatives offered in the IAP appear to refocus the land management in the NPR-A from development to conservation. It is inconsistent with the primary purpose of the Petroleum Reserve. As badly as this country needs new sources of oil and gas, locking up any portion of the Reserve is not acceptable. The benefits of developing this region outweigh any potential benefits derived by locking it up. Please support Alternative D.

[Response to 57.001]
The IAP/EIS properly acknowledges and fulfills the BLM's responsibility for management of NPR-A. For a discussion of BLM's responsibilities consistent with law, see particularly sections 1.1 and 1.5.

COMMUNICATION NUMBER 58
Wendy Loya
Speaker at Anchorage meeting, May 24, 2012

I'm an ecologist with the Wilderness Society here in Anchorage. **[58.001]** Overall, the quantity of oil projected for the entire NPR-A are only a tiny fraction of what has been discovered in the Prudhoe Bay oil fields. Approximately 500 million for NPR-A compared to 13 billion barrels of economically-recoverable oil are the estimates. The amount of undiscovered oil projected to potentially occur in the region around Teshekpuk Lake is equivalent to only about one percent of the economically-recoverable oil in Prudhoe Bay. We would like to see that comparison included in the plan. By contrast, the wildlife and habitat resources are immense and priceless. A recent analysis led by Wilderness Society wildlife ecologist Dr. Ryan Wilson found that the combination of resources that caribou select during calving and insect relief seasons appears to be uniquely concentrated in the areas north and southeast of Teshekpuk Lake. There may not be alternative habitat where caribou can go if oil and gas development is allowed in the calving grounds. We've also developed a model that quantitatively measures the potential impacts of 100 scenarios of oil and gas development on calving caribou for each of the alternatives in the Draft Plan. Our results show that existing oil and gas resources will deplete high-quality caribou habitat by ten percent. Alternative B is the only alternative which keeps further loss to a minimum by not allowing leases in critical caribou calving habitat. Alternative B does allow leasing and responsible development elsewhere where oil and greater gas resources are likely to be found. Alternative B also protects the calving habitat of the Western Arctic Caribou Herd. Significantly less of the calving grounds of both herds is protected under the other alternatives. And our results suggest that one third of high-quality calving caribou habitat would be lost under Alternative D. These are conservative results based on the conservative assumptions in the plan. Additional pads, roads and roads along pipelines in critical habitat would greatly increase the impacts on caribou as well as the communities that depend on them. Please do not diminish the integrity of the invaluable biological resources that have flourished alongside man for millennia in the Western Arctic. This planning effort is an incredible opportunity for the BLM to take steps towards managing the landscape as an integrated ecosystem. We encourage you to adopt Alternative B which protects critical wildlife habitat while allowing industry to explore and develop new technologies that more effectively extract our nation's oil resources and minimize disturbance. Thank you.

[Response to 58.001]
The IAP/EIS provides projections of the amount of oil and gas that might be produced in NPR-A and, in section 3.2.6, notes that more than 16 billion barrels of oil have been produced on the North Slope.

COMMUNICATION NUMBER 59
George Olemaun
Speaker at Barrow meeting, May 21, 2012

. . . .. [59.001] But just in regards to the -- your map here, to begin with, is so -- there's nothing. It just shows the rivers and whatnot. What you need is the campsites. That will show basically all the camps and it will cover the whole North Slope. . . . there's been 50 years of exploration, seismic on the North Slope. And there should be some data somewhere that states what's there. And at the same time that when they started crude oil, they had made plans to go to Chukchi. And what they're following is that Barrow Arch, which they're still doing. That's what it -- goes into the NPR-A from Prudhoe. Prudhoe, Kuparuk, NPR-A. And they follow that up to -- I believe to Point Lay. And that's where the closest area is for Chukchi. And that was their goal. They know. So this is something that's been known. And they planned it. That's -- the industry is still going to their plan. [59.002] And then there's some old drill sites. I know there's a lot of them, especially around Peard Bay. But those, I don't know if they're still working on those. Those need to be considered in the plan to bury or just make sure that there won't be any seepage or -- And then when they're -- when exploration starts, we know there's going to be roads. They're starting with Umiat Road. There's a reason for that. And they're going to follow through onshore all the way across, because that's their -- that's their goal, the state, anyway, to get as much as they can. And there's just one more comment: And that without benefits -- we need to see the benefits. We don't see the potential benefits that are available for everyone. We should get some benefits, either the community or the entities that are -- like ICAS, Native Village, that need help in funding and resources for -- to make sure that our people maintain their lifestyle. Thank you.

[Response to 59.001]
The North Slope Borough's subsistence cabins and fixed campsite locations have been added to Map 3.4.3-4: Barrow Subsistence Use Areas for Whale, Moose and Caribou.

[Response to 59.002]
Legacy wells and BLM's efforts to address them are considered in the plan. See sections 2.2 and 3.2.11.2 - 3.2.11.3.

COMMUNICATION NUMBER 60
Rosemary Ahtuangaruak
Speaker at Barrow meeting, May 21, 2012

I'm living here in Barrow. I'm speaking as a resident. I work as a Tribal Liaison with Alaska Wilderness League. This area is really important to the North Slope. It's vital to our life to continue to have sustainable populations that we rely on to feed our families. We've worked through decades and decades of this process. And yet we're facing the reality that we failed to protect Nuiqsut with the Repsol oil spill -- with the blowout that occurred there, not the oil spill. We're really concerned that we didn't get the protective mechanisms in place. Being diligent of attending local community meetings, expressing the importance for our traditional and cultural uses did not carry through in the process to make sure protective mechanisms, making sure we have capping systems in place to close off a drill if -- a drill site if there is an adverse event, making sure that we have cleanup materials available didn't happen. So really, it's wondering why we should keep going to these meetings when I live religiously attending meetings consistently, month after month, day after day, some -- some months over a hundred meetings in one month, trying to be active in this. And yet you come up with more plans to continue to impact us and continue to give us concerns. And in your document, there's no significant impact with A, B or C? We saw significant impacts with changes in Nuiqsut. And these stories have continued to be stories on paper. And yet the protections to making sure that we have hopes that we're going to have clean waters with the changes that are coming are very real concerns. **[Preamble 60.001]** Existing early development sites have not been cleaned up appropriately. There's some capping techniques that have been put in place, but risk factors with erosion and climate change and all of those factors that are occurring continue to give us reasons for concern. [60.001] We've seen some of these chemicals show up into our fish. It's such a vital important for us to have our traditional foods. It's very important for our nutritional needs, the energy that we need to consume these types of foods from these areas. You can't get them from the boxes you get at the store. We can't afford to buy the amount of foods that are coming from these barges, even here in Barrow, let alone in most of the villages. Nuiqsut has some help with the ability to bring in things by road, but at the cost of losing traditional, cultural use areas. Names that our elders have taught me in my age group are not names that we're teaching my children. And yet when my son -- we took him to our cabin. And impacts prevented him from his first harvest. It took us eight years for him to want to hunt again. That's a very significant impact. And that's being told through families throughout the North Slope. There's a very significant impact. When we have traditional and cultural camps and we're not able to get enough caribou as we have had occur in Nuiqsut, how do you teach the children how to cut up a caribou? By books? Out at culture camps where we can watch them in the distance, but there's too many flights? And words on paper said they would limit flights during June and July when we plan to have our camps. But yet the enforcement, non-existent? Hundreds of flights, even thousands of flights impact our traditional and cultural use areas. And now we have whole communities saying: Enough is enough. Don't come back and have more meetings. Don't come back and have more research and monitoring. You're impacting us too much. But if we don't, can we trust that our resources are going to be there into the future? Those are real serious impacts that we're having to deal with, to decide upon. Do we want to have hopes of looking out there and seeing that the polar bears are still there when the ice is no longer there to the reality of seeing those polar bears coming up on the shore and moving way inland as we've seen? Those are real serious impacts. But yet the significant impacts of having health impacts are not being well understood. This health impact assessment is not going to give us all the answers we need as to what are the impacts to the human health. They're going to give us some of the impacts. The depth of information has been gutted from the health impact assessment. We tried to put a very good process forward, but too many layers were involved and so much was cut out, the effectiveness was cut out from that, as well as having the knowledge of and foresight that we needed the criteria and the databases identified decades ago to show what's really happening to the human health experience to our villages. But I lived on-call. I lived for months and years on-

call. It is very difficult to live in communities that are facing these changes; that poor health aides have to live very limited hours of sleep. They have to respond to many calls. They have to go in for hours at a time to help people to breathe. They have to go and respond to the domestic violence, the social impacts, the suicide attempts, the suicide successes. These are real serious significant human health impacts that are occurring. And yet in your document, you say: Don't worry? We've seen this already. Now you add the compounding of impacts to whaling. That's even more difficult for us to deal with. The whaling is shared throughout the village to every family, every individual who would like to have some. They're welcome to come to our feasting activities. It's so important. But you take that away from us and that's a devastation that's going to carry on. It devastates into the whole lifetime of the village life cycle. Many seasons of activities are impacted with changes such as that. We talked about changes to fishing. I suffered through those, watching the people come to the clinic without having a food bank, watching the people come in and say the same stories, I went out hunting almost a hundred miles, still no caribou, watching the people go out and pull their nets out with absolutely no fish in the fish net. Those are significant impacts. We're going to keep coming to these meetings and sharing these stories, because they're life of us. But now they're going to be amplified in multiple communities and multiple families. I wish we had the depth of people here that could say how many times they came across a helicopter already this nigliq season, how many times they had overflight activity from planes this nigliq season, how many times they had impacts out on the ice or even here in Barrow with the demands that are being put upon us to be diligent to give us the hopes that we're going to be having our traditional, cultural uses into the future. This is a volunteer effort for us to keep participating in these meetings. The demands upon us are astronomical. We have to choose whether or not we're going to go up inland on a beautiful day like this in hopes that we're going to be able to look into our grandchildren's eyes and that they're going to be able to harvest a caribou as our grandparents have taught us to do so. Because my children have already had difficulties in harvesting caribou and fish and whale. [60.002] There are so many stories that can be amplified in this process. But there -- you scheduled this meeting knowing for generations Barrow does spring whaling. Barrow does geese hunting. And you're here at the heart of our harvest seasons again, failing to understand the importance of our life and our traditions, asking us to choose to come into another meeting. These are significant impacts. Alternative A, with the existing oil and gas leases, will cause significant impact. Alternative B will cause significant impacts, Alternative C, Alternative D. It depends on what's going to happen. But the stories will come in with the changes that are happening. I hope that you're hearing some of these concerns, because we're watching more and more health changes come to our people. We have so many people that are dealing with cancer, it's astronomical, the percentages. And yet we're getting a little bit of a health impact assessment? We're getting behavioral health aides. It's okay to mess up the people's lives, know that we're going to disrupt their social life, know that there's many that are going to choose bad actions, but we can't get an environmental health impact? We can't get an environmental health aide to help express the importance of our health at our local community meetings? Well, we have volunteers. I'm one health aide that's no longer working in the clinic. And I volunteered to share the importance of this area and the importance of the significant impacts each and every one of these plans are going to cause. Thank you.

[Response to 60.001]
There are no studies or reports confirming that fish are contaminated by chemicals coming from Legacy wells. While studies have been done to detect hydrocarbon in fish tissue in recent years, those studies have not been done in a manner that would provide evidence supporting the claim in the comment.

[Response to 60.002]
The BLM recognizes the importance of harvest season for Inupiat subsistence hunters, and tries to schedule meetings during which few community members will be subsistence hunting. Comments were also accepted via mail, fax and online. The BLM will continue to make every effort in the future to avoid holding meetings during harvest seasons.

COMMUNICATION NUMBER 61
Darcie Warden
Speaker at Fairbanks meeting, May 23, 2012

I just want to thank everyone so far for all the testimony, because I feel like I'm learning a lot. And I'm also probably going to be echoing a little bit of what's already been said. But I first off want to -- before I dive into what I've written here -- thank the BLM Arctic Field Staff for all of the work that you guys have done on this plan, because it's big. And it takes a lot of work. And you guys have definitely put your time and energy into this, and I wanted to just appreciate you for that. It's pretty massive. And I know you're pulled in a lot of directions, too, and trying to balance all that out. So the Reserve, the National Petroleum Reserve - Alaska is a unique piece of real estate as it is the largest single unit of land managed by the BLM, nearly 23 million acres. Within and along the borders of the NPR-A are essential habitat, wildlife and people and the oil and gas development industry, exploration and development. Under the Naval Petroleum Reserves Production Act, congress specifically identified the Teshekpuk -- I always do that -- Teshekpuk Lake and Utukok River areas as deserving of maximum protection. And two other Special Areas, Kasegaluk Lagoon and the Colville River, have since been recognized. The abundance of wildlife in the Reserve is awe-striking. It provides calving grounds for two of Alaska's largest caribou herds, provides for globally important nesting, molting and staging habitat for migratory waterfowl, seabirds and shorebirds, essential habitat for various marine mammal species, including polar bear, walrus, spotted seal, and beluga whale, internationally recognized raptor nesting concentrations and is home to an impressive predator population, including grizzly bears, wolves and wolverine. The high level of biodiversity and wildlife provide vital cultural and customary use resources that support more than 40 small villages and communities throughout the Northern and Western Alaska. I commend BLM on the evaluation of the alternatives in the plan. And I have -- and the Alaska Wilderness League strongly supports Alternative B. Alternative B is the balanced approach to development and conservation for the Reserve. Even though nearly half, 48 percent of the area, would be open to oil and gas leasing, it provides surface protection for biologically and culturally significant areas. Alternative B prevents oil and gas operations in key areas like Teshekpuk Lake, the upper portion of the Kasegaluk Lagoon, Peard Bay and Dease Inlet, to name a few. Vital subsistence resources and access to resources are protected for the communities of Point Lay, Wainwright, Barrow, Atqasuk, Nuiqsut and Anaktuvuk Pass. Through a separate EIS, if a pipeline were to ever go through the National Petroleum Reserve, there would be another environmental impact statement process involved in that. And it would be taken into consideration, but it would not be allowed on lands where new non-subsistence infrastructure is prohibited. Current Special Areas would be enlarged. And I'm not going to repeat those, because Pam Miller did a great job of covering that area. And under the management that is described in Alternative B, the wilderness -- the areas with wilderness characteristics within the Reserve would be managed as such. And we strongly support the 12 rivers that would be recommended for the Wild & Scenic River status. **[61.001]** I also just wanted to comment on what Daniel was saying in his comments about being meeting'ed out. I think this is a really big piece of the discussion that needs to be much more broadly than it has been. People are meeting'ed out. I've been to the meetings. I've been to the communities. People are confused as to who the agency people are that they're even looking at, they're so meeting'ed out. And I feel like this is something that needs to be examined and analyzed in social impacts in these statements. They need to be in the analysis. These communities are taking on the burden of these plans, all of these plans from all of these agencies, federal to state. That's a cumulative impact. That's an environmental justice issue. And that needs to be taken seriously. So I'll just end with that. That's the take-home statement right there. Thanks.

[Response to 61.001]
The BLM acknowledges this issue and recognizes it as a social impact (see Section 4.3.14.2: Sociocultural Systems: Oil and Gas Exploration and Development Activities: Effects on Social Health). The Arctic Field Office consistently makes efforts to make its meetings worthwhile but is also attempting other methods of fulfilling requirements for public notification and government-to-government consultation.

COMMUNICATION NUMBER 62
Jenna Hertz
Speaker at Fairbanks meeting, May 23, 2012

I'm here tonight because the Western Arctic is just a magnificent place that I've been lucky enough to spend a little bit of time exploring and learning from with Stan as my power in the canoe, actually the steering. I was the power. And I'd really like to continue to be able to go up there and experience things into the future. So I'm going to submit longer comments specific to the plan. But with a couple minutes, I'm going to try and keep it simple. So this land that, for the past 90 years almost, we've claimed as our Petroleum Reserve has existed in a fairly balanced state for millennia. And the next 50 years, the NPR-A is poised to change really rapidly. And that's actually until I'll be 73. So I'm highly interested in what goes on. So the four, big-ticket, major development proposals, including the widely opposed and economically speculative road to Umiat -- and thank you for including in Volume III messages from people specifically from Anaktuvuk Pass opposing that – plus the real, but difficult to predict, damage in store from global climate change, and the outcome is a stressed and a very uncertain future for the region that this plan concerns.

[62.001] And since the oil and gas industry is the single largest contributor of Alaska's greenhouse gas emissions at 29 percent, I would request that a little bit more connection be made between the alternatives that allow more oil and gas leasing, like D, and the intensification of global climate change and the resulting damage to the land that BLM is managing. And I understand that BLM does not regulate climate change. But as we know, everything is connected. And I'd hope to see a little bit more of that in such a big, integrated plan.

So this total picture reinforces a really critical need for Alternative B, I think, because it's the most scientifically sound and environmentally responsible way to move forward with the mandate to lease oil and gas while still extending protections for special places. And I'm not just talking about bird habitat. reading through the EIS, I kind of realized that Alternative B offers consistently higher standards in things like human health, environmental justice issues, and a lot of mitigation measures that are also in the other alternatives. And it really offers us balance. It's not an attempt to lock up the Petroleum Reserve. It still provides an average of 390 jobs in the North Slope Borough. And the residents of Alaska would have an annual increase of 7,600 jobs. I'm not sure exactly how those numbers were obtained, but it still means jobs. It still means drilling. And at the same time, it identifies the five Special Areas that deserve extra consideration and 12 Wild & Scenic Rivers, which I'm really excited about. As was mentioned, over the past decade, USGS findings have lowered the estimates of the amount of oil in the NPR-A by 90 percent. In 2011, the U.S. became a net exporter of oil, a trend that's expected to continue. And all around me, I'm seeing conservation really becoming a reality, an economic reality. And it seems like this is a really great opportunity for us to identify and protect places like the Utukok Uplands Special Area where the Western Arctic Caribou Herd that, you know, 43 communities rely on for subsistence. They calve up there. And the potential for recreation is really high. And as Ron mentioned, the potential for oil is pretty low. I'm also really excited about the new Peard Bay Special Area and how it prioritizes marine mammals. It seems to me that if we're truly committed to responsible oil and gas development, then we should surely leap at the opportunity to take an alternative that's maximally protective of our land. . . .. The other thing – one of the things that I noticed, I'm really focused on the future. **[62.002]** So as I was reading through the plan, I saw that the renewable energy section is based off of studies that were in the Lower 48, not in Alaska. And I think there are a lot of good studies in Alaska that would be a better baseline for that. And as Ron mentioned, really incorporating tourism. There was a section that said there was basically like, you know, no tourism income in an economic analysis.

[62.003] I think there are a lot of things that should be included, like the fact, like how expensive cleanup is. I saw Umiat this summer. And I heard about -- there's been a lot of news about the -- like the Drew Point well that cost $16.8 million to clean up. It's not just that we're making money and jobs off of oil and gas; it's also costs that will extend out into the future, especially when spills happen. And the plan assumes like 500 spills, mostly small. But it's a really expensive, risky game.

So in conclusion, in creating a plan for our nation's largest piece of public land, much of it de facto wilderness, we're not just choosing an alternative from a 12-pound document, we're choosing really a lifestyle for our nation. So it's maybe time to realize that we need less oil and more special places. Thank you guys for having this meeting and including a "no leasing" language as part of the stipulations for these Special Areas is an important thing which may have a legacy into the future. . . .. And so I would encourage BLM to expand and include Peard Bay, to expand Kasegaluk Lagoon, to expand Utukok Uplands Special Area to include the southern areas, and to make the Teshekpuk Special Use Area as large and restrictive as possible.

[Response to 62.001]
When compared to the total U.S. emissions of carbon dioxide, each alternative would contribute miniscule amounts of direct emissions to national levels.

[Response to 62.002]
The BLM assessed renewable energy resources outside Alaska in 2003 and provided some of the screening criteria which could be applied to evaluate potential renewable energy sources in Alaska. The Alaska Energy Authority was a primary source of information for this section. It provided additional references used for assessing the potential for wind, solar, biomass and geothermal energy sources.

[Response to 62.003]
The legacy wells in NPRA were drilled and managed under different regulations and requirements compared to the development analyzed in this IAP/EIS. Also, the infrastructure available to support a cleanup from the legacy wells is different than the infrastructure required to support the scenarios described in the IAP/EIS. Therefore comparisons would be invalid and probably misleading. Nevertheless, it should be noted that the financial cost of spill cleanup is the burden of the owner or (in some cases) the shipper of the oil, not the public or the government.

COMMUNICATION NUMBER 63
Ron Yarnell
Speaker at Fairbanks meeting, May 23, 2012

I own a wilderness guiding business and have been guiding in the Arctic for 40 years, actually 41 this summer. I've led trips into such areas as Arctic National Wildlife Refuge, the Gates of the Arctic, the Noatak National Preserve and NPR-A. When I first started guiding, there were very few people that used or even entered these areas 40 years ago. You could go on some of these rivers and not see another person. Actually, the NPR-A still has some rivers like that yet today. But these other areas don't have as many. Today, places like the Kongakut River in the Arctic National Wildlife Refuge and the Noatak River in the Western Brooks Range actually have overuse issues. And there are a number of other rivers in the Arctic that have overuse issues. In the National Petroleum Reserve, rivers like the Nigu, the Etivluk and the Colville have always been popular rivers with floaters and hunters and other wilderness adventurers. They're not overrun, but there have been quite a bit of – there has been quite a bit of use to those areas. More recently, rivers like the Utukok and the Kokolik in the western part of the National Petroleum Reserve are experiencing increasing -- significantly increasing use. One of the things that I thought the Draft EIS may need to revise a little bit is those uses in those rivers in the National Petroleum Reserve, the use is increasing – commercial use and recreational use is increasing significantly every year more and more. I think they have the use statistics for 2005 and then 2010, I mean, that time period, but nothing beyond that which, obviously, you probably didn't have the information yet. But each of the last few years, the use has actually been like doubling on some of those rivers. In the not too distant future, rivers like the Nuka, the Kuna, the Kiligwa, the Awuna, Driftwood Creek and Carbon Creek are going to start to see increasing use. I mean, we think, wow, way up there. People really go to these kind of places? And it's yes, they do, especially Alaskans. **[63.001]** There's getting to be more and more people, not just from Alaska, but from the Lower 48, too, using some of these places that a lot of us haven't even heard of, so -- and it will start to increase more and more. In fact, my feeling is when pack rafters find out about some of these more inaccessible rivers that are hard to land an airplane in, how they could land on the south side of the Brooks Range and hike across the mountains into those ranges and then float on out to the Colville River, it's going to be quite -- become quite a popular activity. I'm not saying it will be overused or anything, but that's what we said years ago about the Kongakut and the Noatak and the Koyukuk and places like that. So I do think that you do need to look at those -- the information you have on the use activity in the National Petroleum Reserve on some of those rivers and maybe try to project what could happen in the future. Also, I think most of your -- most of your statistics do only reflect commercial use and not the noncommercial use, because there's really -- it's very difficult to find that information out, how many people have flown in on their own or with charter -- you can probably find some of that information with the charter outfits. But it's very interesting, just in the Kokolik and the Utukok, especially the last few years, more and more groups are going in there. And there are places that people are hiking into and flying in on their own and doing some float trips and stuff like that. You just wouldn't really imagine that there are that many people starting to use the area already. It's becoming better known, so -- Not only are the southern areas important, but the calving grounds -- to recreational things, but the calving grounds of the Western Arctic Caribou Herd and the Teshekpuk Herd are real critical. The lakes and the rivers farther north on the Slope are also important breeding and nesting areas for waterfowl. And the coastal areas, of course, are real important for marine mammals. Personally, I support Alternative B. I don't feel it goes far enough to protect . . . all of the area; it just protects parts of the area within those Special Areas. I think most of the Special Areas should be excluded -- all of the Special Areas should be excluded from oil and gas exploration. Thanks for actually doing the plan for the whole area instead of continuing the piecemeal approach that was done in the past. And I'd also like to see the southern banks of the Colville River somehow protected or have some kind of cooperative agreements with the state and the

Native corporations, so both banks of the Colville could be somewhat managed to minimize the impacts of oil development Thank you very much.

[Response to 63.001]
The IAP/EIS discusses the existing and potential changes to use of NPR-A by recreationists. The BLM does not have access to nonguided individual visitor use data within the NPR-A, as it is not an activity that requires a permit from the government.

COMMUNICATION NUMBER 64
George Sielak
Speaker at Nuiqsut meeting, May 16, 2012

I think one of the concerns that I would bring out is the history of NPR-A and how government has used this area during the '40s, '50s, during their exploration. And the main concerns I would like to bring up is if they are to continue to do exploration or open leases on NPR-A that they should clean up all their wells that they had abandoned and plugged. And I think we brought that up before, or I have brought that up before when they talked about the road to Umiat. **[64.001]** If they should try and continue to look for oil in the NPR-A, I think that it would be wise for the government to go out and clean up their act. Because we know there are a lot of wells out there. I know. I've read about it. And they have abandoned a lot of wells. And they need to come back before they continue to look for oil in NPR-A. And the other thing I want to bring out, too, is since we had the incident that happened this winter in February -- we had a blowout from one of the exploratory companies that was drilling for oil -- one of the important things that I would bring out is that I think our local government and our agencies should strengthen the regulations, stricter guidelines on air emission because of industry getting close to human communities. Because I know in the past, operators permits and get okay from government to do some industrialized work up on the Slope. And they say it's not harmful for humans, but they know they say that because they know they're -- they think that nobody lives up here. But with the growth of Prudhoe Bay and Kuparuk and Alpine and increase of seismic activity up here, that it kind of bothers the human -- the environment where our human -- you know, they breathe the oil -- I mean the air. They breathe the air. And I think that has a lot of effect on our people up here. And with this Shell thing coming up, that I think that it's very important to strengthen the guidelines and regulations so it can minimize health impacts or make it safer for our people to breathe the air for the activities that they're doing up here. And I think that's all I wanted to bring. Thank you.

[Response to 64.001]
The BLM discusses its work to address inactive wells drilled prior to transfer of NPR-A to BLM management in section 2.2, which discusses management common to all alternatives.

COMMUNICATION NUMBER 65
Sam Kunaknana
Speaker at Nuiqsut meeting, May 16, 2012

I'm a City Councilman for the City of Nuiqsut. And I'm a Kuukpik Subsistence Oversight Panel member for Nuiqsut. **[65.001]** And my concern over here on what's been said over here at this meeting here is when you talk about environmental impact studies, you talk about the resources that we eat over here. And the one thing that hasn't been mentioned is human beings. We should be the number one resource over here, because we live here. Birds migrate here seasonally. Fish come over here seasonally. But us, the people, we live here. I've noticed changes over here since Alpine started over here back in 2000. And there's some things that -- you know, there's laws in place right now and there's people over here, the elderly over here, that don't understand some of these laws that are now in place for development. And I'm going to say the white man over here -- I'm not prejudiced or nothing -- they put these -- they put letters on these papers over here that state that this is the law. And what I'd like to see is the white man practice the law when they say that -- when they say that, you know, they're going do these things over here. You need to practice what you preach. There's things over here that you guys don't take into consideration when it comes to development is that there's human beings living around in this area over here. And that's the number one thing that I haven't seen in any of your presentations over here. It's all about the animals. We're the ones that live over here all our lives. We're the ones that are being impacted from development in this area. There's a lot of things that I'd like to say, but, you know, one thing that you guys should have done would be to go to these different entities and have a little workshop over here to get us prepared to do our testimonies over here. **[65.002]** And, you know, as for the caribou, you know, the east side, what Billy was saying earlier, is that they've noticed that the migration of the caribou has changed since those structures came into place over here. Back then, there was no laws. Now there's laws over here that people understand. And I'd like to see that being practiced over here, especially when it comes to traditional knowledge on the Central Arctic Herd and the Western Arctic Herd over here. What I'd like to see is traditional knowledge incorporated into the west side of the Nigliq Channel. That needs to be in there first before all is said and done over here. Because we know and you guys know, according to Stacey, that the caribous are going to be impacted. We know they're going to be impacted, but -- you know, we know they're going to be impacted because of these structures over here. And we know that when they're impacted, we're impacted, not just from the caribou, but from the fish and the birds. We eat just about every animal there is in this area over here. And another thing is that **[65.003]** I have a concern here on the studies that need to be done over here on the vegetation that our animals eat over here. Because I've noticed since 2000, since Alpine got started, the caribou around this area have kind of depleted. They don't stick around this area no more. We have to go further out or wait for the caribou herds to come by, which, by me, are just scattered herds. Years back, we used to see the big herds come by through over here. Now with development on the east side, they're all scattered. And the vegetation, to me, in my opinion, from all that tonnage that's coming out from the smokestacks around Prudhoe Bay area is affecting the vegetation over here from which the caribou eat. There's got to be more studies done, better studying.

[Response to 65.001]
The BLM agrees with this sentiment and has included systematic and broad-based public health impact analyses in the past two planning efforts for the NPR-A. These analyses include biomedical health outcomes as well as a description of environmental and social conditions that impact human health. These health analyses are in addition to the analyses on the cultural and nutritional importance of subsistence and the sharing system, on an extensive discussion of sociocultural systems among North Slope Inupiat, and an analysis of historic and current environmental justice issues on the North Slope.

[Response to 65.002]
In the NPR-A, the BLM will apply the best of the mitigation learned over the past four decades in the State oil fields, and is taking some measures over and above those employed by the State. The IAP/EIS summarizes what is known from past experience regarding the impacts of oil development on caribou.

[Response to 65.003]
The IAP/EIS summarizes the current knowledge of the effects of oil field development in the central North Slope on caribou movements. The BLM will employ mitigation measures to reduce those impacts to the extent possible. The IAP/EIS also summarizes what is known about the effects of oil field air emissions on vegetation.

COMMUNICATION NUMBER 66
Thomas Napageak
Speaker at Nuiqsut meeting, May 16, 2012

City Mayor, Tribal Council member, and I wear another five other hats. **[66.001]** The environmental impacts, I basically want to talk about what another Council member was talking about, social impacts on humans. Like he was stating, we are the ones here. And I would like to see what BLM has to -- if the human health is on the EIS, then what else is on the human health for our social impacts? **[66.002]** We're the ones subsistence hunting. And yet nothing has -- what role or where does BLM stand under the umbrella of the Tribal Council? What type of consultation has been made with us prior to our 30-mile radius of where our subsistence users are in our area? Those are my basic -- that was my basic question -- comment. Thank you.

[Response to 66.001]
The BLM has included systematic and broad-based public health impact analyses in the past two planning efforts for the NPR-A. These analyses include biomedical health outcomes as well as a description of environmental and social conditions that impact human health. These health analyses are in addition to the analyses on the cultural and nutritional importance of subsistence and the sharing system, on an extensive discussion of sociocultural systems among North Slope Inupiat, and an analysis of historic and current environmental justice issues on the North Slope. The issue of social impacts is also addressed in the sections that discuss the economy.

[Response to 66.002]
The BLM is committed to coordinating and consulting regularly with tribal governments to identify and consider their concerns in BLM land use planning and decision making. In addition to the requirements of government-to-government consultation and ANILCA, the BLM Arctic Field Office coordinates the NPR-A Subsistence Advisory Panel expressly for the purpose of gathering input and recommendations from residents before oil and gas activities occur.

COMMUNICATION NUMBER 67
Danny Pikok
Speaker at Point Lay meeting, May 14, 2012

[381.001] And I feel this is like a trap. Because this time of the year, we are very busy with hunting. And as you can see, this is a skeleton turnout because everybody's out on the ocean right now butchering a whale. And all of our officials are out on the ice, if they're not home resting, because it's a lot of work for a small community to land a 50-foot whale. Being a member of Native Village of Point Lay, I want to say this is -- this is not right for the people of Point Lay, for the Slope, for that matter. What I'm trying to address is that when this stuff comes to us like this, it should be dealt with middle of winter when most folks are home. And I feel that it's only right for Native people that we be given more time to deal with really important matters as we are talking about this evening. So please take that into consideration. Springtime is a very busy time for the whole Slope. Not just for Point Lay, it's for the whole Slope. And I feel that we need to have this kind of meeting more in the setting like in the summer or in winter, not spring or fall when we're out harvesting our seasonal harvest. So thank you for giving me a chance to comment.

[Response to 67.001]
The BLM recognizes the importance of harvest season for Inupiat subsistence hunters, and tries to schedule meetings when few community members will be subsistence hunting. Comments are also accepted via mail, fax and online. Note that BLM conducted an additional public meeting in Point Lay on June 5, 2012, due to the whale landing. This meeting was held to accommodate those people who were harvesting.

COMMUNICATION NUMBER 68
Lola Tukrook
Speaker at Point Lay meeting, June 5, 2012

[19452.001] I would like to comment that Icy Cape area is a part of the caribou sanctuary for getting away from the bugs.

[Response to 68.001]
The IAP/EIS acknowledges that all coastal areas may be used for insect relief by caribou, and mitigations to maintain that value are found within the range of alternatives.

COMMUNICATION NUMBER 69
Robert Shears
Speaker at Wainwright meeting, May 15, 2012

My name is Robert Shears, a 14-year resident of Wainwright, a subsistence hunter, fisher and trapper every month of those years that I've been here. . . . I specifically use are the local area of Wainwright, the Kuk drainage, the Utukok River drainage and the Colville River drainage, the Upper Colville River drainage. So I will -- my comments tonight focus specifically on those areas that I'm familiar with and comfortable with. And I'll leave Teshekpuk comments to Barrow and the people that are impacted by them. I am an appointed member of the North Slope Borough Planning Commission and was recently appointed by Secretary Salazar to represent the North Slope on the Subsistence Advisory Council. I have a personal opinion where I feel oil and gas development can be balanced with subsistence. I'm kind of a middle of the road type of guy. And therefore, I like Alternative C. **[69.001]** However, there's something blatantly, glaringly absent from it that I hope you guys would consider. And I think other people in this community would, regardless of whether they support oil and gas development or complete environmentalists and don't want any development at all, they would probably stand behind me on this comment is how did you guys miss designating the entire Kuk River drainage as a special use area? I see that you got the Kasegaluk Lagoon, and I agree with that. And you're adding the Peard Bay to the options, and I agree with that. But the biggest special use area most important to us, the residents right here, where 50 percent of our food source or more comes from, is that river and all the lands that it drains from here, from the coastline to 100 miles inland. And I know basically it creates a wall, a barrier to development to the west of here that BLM cannot consider for oil and gas leasing by having such a huge special use area cut right through -- you know, bisect NPR-A. But you could possibly utilize the narrow coastal corridor right here where our village exists as an access area to the western areas. I would hope that you would look at the flora and fauna, the bird rookeries, the fish that exist in this river drainage as probably the most important habitat area on the entire North Slope. And how you guys have missed it for so many years is beyond me. Please consider the Kuk River drainage for special use area addition to Alternative C. Thank You.

[Response to 69.001]
The BLM considered a wide range of areas for potential addition to Special Areas. While portions of the upper Kuk River has long been part of the Utukok River Uplands Special Area, the upper Kuk River has not been seen as requiring the protection of a Special Area designation. Special Area designation would not preclude construction of Chukchi Sea infrastructure.

COMMUNICATION NUMBER 70
Terry Tagarok
Speaker at Wainwright meeting, May 15, 2012

What I learned from my elders growing up in our village is they taught us to show respect, respect for the elders, respect for the land, the mammals and fish and wildlife we depend on. We were taught to only get what we need for each season.**[70.001]** And I'm hoping that the federal will come to us and talk to us on what they are planning to do before they draft up or make into regulations of what they want to do. This is our land. And before Alaska became a state, we were conservationists. We protected our land. And when Prudhoe Bay came around – before Prudhoe Bay came around, there was nothing, no structures, no airports. And now it's just -- just like a city over there now. And what I'm hoping is that the federal government will listen to us prior to them making their decisions on what they want to do on our lands. Because whatever they decide, it will impact all the fish and wildlife, all the animals that we hunt for. And we won't know what's going to happen after everything is established. And thank you very much for coming.

[Response to 70.001]
The BLM is committed to coordinating and consulting regularly with tribal governments to identify and consider their concerns in BLM land use planning and decision making. In addition to the requirements of government-to-government consultation and ANILCA, the BLM Arctic Field Office coordinates the NPR-A Subsistence Advisory Panel expressly for the purpose of gathering input and recommendations from residents before oil and gas activities occur.

COMMUNICATION NUMBER 75
Bruce Babbitt

Bruce Babbitt
5169 Watson St NW
Washington, DC 20016
May 21, 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

I am pleased for this opportunity to comment on the Draft Integrated Activity Plan/ Environmental Impact Statement for the Alaska Petroleum Reserve. Both during and after my time as Secretary of the Interior, I have come to know and appreciate this exceptional place with it unique ecological resources. The NPRA is the largest block of public land administered by the BLM, and it deserves the highest degree of careful analysis and decision making.

Upon reading the document I am impressed with the large amount of useful and important information incorporated into the various alternatives, including both physical and biological resources and social systems. And it will come as no surprise, I expect, to say that I strongly endorse Alternative B as providing the most protection for the wildlife, ecology and critical subsistence uses of this region of the Arctic.

In the time available for an initial review of this document, I would single out three topics that I believe are most in need of critical comment and revision.

The Construction of Permanent Gravel Roads

The four alternatives presented in this EIS, propose to open no less than eleven million acres, an area more than 5 times the size of Yellowstone National Park, to oil and gas development. Given such a large commitment, it will be critically important to spell out exactly how energy companies will be allowed to operate across this landscape. The EIS addresses this issue through proposed lease stipulations and required operating procedures and/or best management practices. And for all their detail, these proposals fall way short of best practices now available within the industry.

The most damaging aspect of oil and gas development is the construction and use of permanent roads. Roads are disruptive to wildlife, and they inevitably encourage and promote activity unrelated to oil and gas development. Virtually without exception, road networks, initially promoted as limited in scope, gradually metastasize into wide area road networks, degrading natural areas, harming wildlife, and promoting other forms of incompatible development.

The negative impacts of roads are especially evident on the tundra wetlands of the Arctic slope. Many of these effects are noted throughout the document, including disruption, blockage and alteration of drainage patterns, alteration of plant communities affected by dust deposition and salinity of gravel fill, the spread of thermal karst and disruption of migratory wildlife pathways. **[75.001]** The destructive effects of permanent road building have been widely recognized, and roadless development is now an accepted standard, successfully used in many parts of the world. Roadless development is especially important in the sensitive tundra wetlands of the Arctic slope. And the oil and gas industry has already demonstrated the feasibility of doing roadless development in the Arctic, utilizing ice roads, rolligons, helicopter transport and extended reach drilling.

Yet notwithstanding the availability of these industry best practices, the BLM has in this EIS chosen to ignore this issue and to accept, if not actually endorse, the extensive use of gravel roads as an expedient part of industry practice. See, for example, the discussion under "Roads"

in chapter 3. **[75.002]** Remarkably, the draft EIS appears to also endorse construction by the State of Alaska of a road to Umiat for the sole purpose of promoting speculative exploration. The draft EIS simply accepts this road as an accomplished fact, stating "The state is building the road with the hope that it will help promote oil and gas development in the area and within the NPRA." How an EIS devoted to oil and gas, with the word "Planning" in the title , can be considered adequate when it endorses , without comment, the proposal to build this road is to me inexplicable. [75.003] Elsewhere in the EIS the text seems to suggest that since a separate EIS will presumably be prepared for that portion of the proposed Umiat road that will cross within the NPRA, there is no need to consider the matter further. However, a project specific EIS, premised on an assumption that the road will be built, is not a substitute for a sound planning decision by the BLM whether the road should be built at all. If the Umiat proposal goes forward, it sets a woeful and unacceptable precedent--- that the BLM will remain on the sidelines, silently acquiescing in state sponsored road building within the NPRA.

The Designation of Special Areas

The special areas recommended in option B are a good start. However, the limitations of the Special Area designation are real, making for a very weak result. The BLM recognizes this, noting in the document "Special Area designation does not itself impede oil and gas development' and that the designation "does not impose specific protections"

Thus the protections suggested in this document amount to little more than a statement of administrative policy by this one Administration, policies which can be readily changed by any successor administration. As I read the document, administrative changes could be made in the future to allow oil and gas exploration within Special Areas without even changing the Special Area designation.

It is this evanescent quality of Special Area protection that has prompted many groups to ask the BLM and this Administration for a stronger statement of protective policy in the NPRA, including suggestions for wilderness designation or the establishment of wildlife refuges or legislatively protected BLM areas. Such suggestions, however, have been brushed aside in this document as "not within the scope of the document." For a self styled planning document, this is a very timid approach, put forward with no explanation or discussion, entirely at odds with the very idea of planning. The document should be redrafted to address a true administration policy for meaningful permanent protection of Teshekpuk Lake, the Utukok Highlands, and the other special areas proposed in Option B.

Infrastructure in Support of Chukchi Sea Oil and Gas Leases.

[75.004] The draft EIS makes it clear, stating repeatedly throughout the document, that BLM has planned the four alternatives to include space for onshore infrastructure to deliver oil and gas discoveries from the Chukchi Sea onshore into the western NPRA and then eastward across NPRA to Trans-Alaska Pipeline System at Prudhoe Bay. This policy is enunciated repeatedly, notwithstanding disclaimers throughout the document that consideration of infrastructure in support of offshore development is not within the scope of this EIS.

In effect, BLM is announcing a policy planning decision, even as it loudly disclaims intent to do so. How this alternative can be anticipated and foretold, without any analysis, is an enigma to me.

If and when Chukchi Sea oil is discovered and developed there will be alternatives to on shore delivery to Prudhoe Bay through the NPRA. One such alternative is delivery be by undersea pipeline directly to Prudhoe Bay. The technology of undersea transmission is well developed and extensively used by other Arctic region countries. Whether this would be an environmentally preferable method of delivery is impossible to say without more extensive fact finding and independent analysis, not just by oil companies but by the Bureau of Land Management.

It is this unfortunate habit of making planning decision by indirection, acquiescing in the preference of energy companies and the state of Alaska, that shows up the inadequacies of this

document. At the very least the document should be redrafted to clearly state that BLM has no policy or preference as to mode of transmission, that infrastructure options are a critical consideration, and that the BLM will in timely fashion, sooner rather than later, undertake a planning exercise that is not tilted in favor of any alternative advanced and advocated by energy companies or the state of Alaska.

[Response to 75.001]
The IAP/EIS anticipates that techniques that minimize impacts to the tundra will be used in development in NPR-A. See the discussion on winter ice roads, snow-packed trails, and alternate transportation systems, such as marine barging and/or airstrips for year-round access in Chapter 4, Section title "Oil and Gas Exploration and Development Activities."

The plan analysis also assumes that future activities in the NPR-A would follow the example of development at the Alpine field which includes roads linking its central processing facility, most satellite production pads, and an airstrip. Consistent with this assumption and the recent decision by the Corp of Engineers to authorize a road bridge to connect the CD-5 Alpine satellite pad with the Alpine central processing facility pad, the IAP/EIS assumes such a road would be built. Development of as yet undiscovered oil and gas resources are assumed to have minimal gravel infrastructure. Moreover, required operating procedure/best management practice E-5 mandates that the development footprint be minimized. Note, however, one of the purposes of this plan is to provide the opportunity to construct necessary infrastructure to support bringing oil and gas resources from the Chukchi Sea to Trans-Alaska Pipeline System and/or a future gas pipeline. This infrastructure may require a road that would link NPR-A to the Dalton Highway area.

[Response to 75.002]
The State of Alaska has proposed a road to Umiat and an environmental impact statement is being drafted. As such, it is reasonably foreseeable, and is proper to be analyzed in the cumulative impact analysis. Such analysis is required under NEPA and does not constitute an endorsement of the State's proposed road.

[Response to 75.003]
The Road to Umiat EIS (aka Foothills West Transportation Access Project) is being prepared by the State of Alaska DOT, and the U.S. Army Corps of Engineers is the lead Federal agency. As BLM does not control the land over which the road is proposed to be built, the impacts of the road to Umiat are appropriately considered in the Cumulative Effects section of the IAP/EIS.

[Response to 75.004]
The IAP/EIS makes no decisions regarding Chukchi Sea development. If an application for development is received, the BLM along with other permitting agencies will address a reasonable range of alternatives regarding the location and major components of the infrastructure. The IAP/EIS appropriately discusses the potential cumulative impacts of offshore development, including the potential for that development to include onshore infrastructure in NPR-A.

COMMUNICATION NUMBER 76
Greta Burkart

Below are my comments on the NPR-A DEIS.
Thank you,
Greta Burkart
Alaska

[Preamble 76.002, 003, 004, 005] 3.3.4.5 Fish and Climate Change

[76.001] In the second paragraph on page 221 "permafrost melting" should be changed to "permafrost thawing."

[76.002] In the second paragraph on page 221, it should be noted that changes in the active layer will likely lead to increased active layer depths, which is expected to lower the water table, and could potentially lead to drying of migratory corridors.

[76.003] The following sentence should be removed (page 221 , 3rd paragraph): "As a consequence, the future aquatic habitat shifts that may occur, if any, are not clear." Rationale for change: Analyses by SNAP 2011 (referenced in this section) indicate "hydrologic changes are likely" and that the extended duration of the summer season, permafrost thaw, and changes in vegetation will drive drying in the foothills and coastal plain. Since hydrology is so important to fish, this should be noted in this section. Martin et al. 2009 also indicates that hydrologic changes are likely and drought-like conditions that may include drying of stream channels that act as migratory corridors for fish (e.g., essential fish habitat) are expected to occur, especially in the coastal plain.

[76.004] The last sentence of paragraph of the third paragraph on page 221 (Vol 4) should be removed. The references used (Marsh et al 2009 and Woo and Guan)should also be removed as they do not support this statement in the context of this paragraph, which is referring to the effects of increased evapotranspiration during the summer. The references used are referring to patterns in connectivity during snowmelt not changes in connectivity as the summer progresses. Furthermore, both Martin et al 2009 and SNAP 2011 indicate that drying of stream networks is likely.

[76.005] This section focuses on uncertainty even when most models indicate that some changes are likely and ongoing. Please add a section on what this uncertainty means for management of fish habitat and potential changes to current practices and regulations. Please add more information on which changes are considered likely. This section should also discuss data and monitoring needs

[Response to 76.001]
The text has not been modified. "Permafrost melting" is a scientifically accepted term, utilized in well-known peer-reviewed journals (e.g., Geophysical Research Letters, Vol. 32, L21413, doi:10.1029/2005GL024413, 2005 and Journal of Geophysical Research, Vol. 111, G02011, doi:10.1029/2005JG000099, 2006).

[Response to 76.002]
The text has been modified.

[Response to 76.003]
The text was changed to "As a consequence, the future aquatic habitat shifts that may occur are not clear."

There are still many uncertainties in what precise changes will occur in fish habitat, largely due to the complex interactions associated with the hydrologic cycle (see the two sentences in this paragraph preceding the sentence in question). Therefore, it is still more accurate to note that certain changes "may" occur rather than saying that they "will" occur. Removing "if any"

acknowledges that some changes will likely occur, but we just don't know how those changes will be manifested in fish habitat.

[Response to 76.004]
The text has been modified so that the sentence in question clarifies that the changes in connectivity being referred to are during snowmelt. The context of the paragraph is not the effects of increased evapotranspiration during the summer. The context of the paragraph is how the complex nature of the hydrologic cycle can lead to different manifestations of change in fish habitat in different environmental settings, thus the documentation of two different patterns of lake change (Smith et al. 2005; Hinkel et al. 2007; Jones et al. 2009; Marsh et al. 2009) and different patterns of connectivity (Woo and Guan 2006; Lesack and Marsh 2007), albeit during snowmelt specifically, as pointed out by the reviewer. Snow is clearly identified as one of the prominent climate elements that is predicted to change noted in the second sentence, as it is a form of "precipitation".

[Response to 76.005]
This section clearly acknowledges the changes that are predicted to occur and identifies documentation that some of these changes are actually occurring on the ground according to recent trends. However, it is also accurate in pointing out that how these changes are reflected in fish habitat can vary in different regions or environmental settings, as described in peer-reviewed scientific literature (for example, lake surface area increasing versus decreasing and stream-lake connectivity duration and timing during snowmelt runoff). The section also clearly describes, with examples, how the lack of specific knowledge regarding tolerances of Arctic fish species makes predicting the impacts on those species from future habitat shifts extremely complex and difficult. The recommended additional sections (i.e., implications for fish habitat management, changes to current practices and regulations that could be caused by uncertainty and data and monitoring needs) are not within the scope of the Environmental Setting section of an EIS.

COMMUNICATION NUMBER 77
Steven Borell

[77.001] The Alternatives and this analysis are fatally flawed because they include consideration for Wild & Scenic Rivers which will require Congressional action before such can be established, but do not include consideration of opening NPRA to mineral entry and to coal leasing.

It is arbitrary and capricious to consider further restrictions that require Congressional approval but to not include opening the area to mineral entry and coal leasing.

[Response to 77.001]
The BLM has determined that it would not recommend legislation to allow hardrock and coal mining as part of this plan. For a discussion of that determination, see section 2.4.3.

COMMUNICATION NUMBER 78
Tom Cade

Date: 8 June 2012

To: NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw St., Suite 490
Anchorage, AK 99513

From: Tom J. Cade, Prof. Emeritus, Cornell University

Re: National Petroleum Reserve-Alaska (NPR-A) Integrated Activity Plan/Environmental Statement (IAP/EIS)

Dear BLM Planners:

Once again, I appreciate the opportunity to comment on your Draft IAP/EIS for the entire petroleum reserve in Arctic Alaska, a region the proper care and management of which have been a particular concern of mine for 60 years-long before BLM became the official manager in 1976. I will not bother to provide particulars of who I am or my qualifications to comment on this document, as these personal details should be well known to you from my previous responses on the planning documents for the NE NPR-A Plan, the NW Plan, the Colville River Special Area, my scoping comments for this IAPIEIS, and other correspondence going back more than 20 years.

You have provided a very large, detailed, and somewhat difficult document to digest. It is almost an encyclopedia of information about the environment, wildlife, human occupance [native and modern], distribution and abundance of both renewable and nonrenewable resources, and the potential future impacts of climate change and other anthropogenic influences on the natural ecosystems of the NPR-A. It is a wonderful source of information for anyone interested in Arctic Alaska. Thank you for putting it together in such detail. I have not been able to read the entire document, but I have read the executive summary, most of chapters 1-4, and examined all of the maps and many of the figures and tables, concentrating mainly on issues to do with birds and other wildlife.

Without wandering too far off the reservation, I think it is important to view the various assumptions and proposals offered in this Draft IAPIEIS in the larger context of what has been happening on the Arctic Slope of Alaska since the 1970s and what is likely to happen in the next 20 to 30 years. The Arctic Slope is now divided up into various ownerships and jurisdictions, some of which are private or native lands, some belonging to the State of Alaska, a majority of which are federal lands, and some of which have been leased for petroleum exploration and development. "Maximum protection" of wilderness and nature occurs mainly in the Brooks Range in such magnificent places as the Arctic National Wildlife Refuge, which also protects a limited amount of the foothills and coastal plain, the Gates of the Arctic National Park, and the Noatak National Preserve. The largest holding is the 23 million acre NPR-A, where BLM attempts to manage for multiple uses in a "fair and balanced way." It tries to provide "maximum protection" to the landscape and renewable surface resources consistent with the exploration and development of nonrenewable, subsurface resources, mainly oil and gas, as mandated by federal law. Its boundaries encompass the largest portion of the unique, coastal plain tundra in Arctic Alaska, as well as much of the northern and southern foothills up to the Brooks Range. Except for the coastal villages, native and state lands lie mostly to the south and east of the Colville River, which delimits part of the southern and all of the eastern boundary of the Reserve.

Since 1976-77 there has been a major industrial development for oil on the coastal plain beginning at Prudhoe Bay with later extensions westward to the Kuparuk River, and most recently to Alpine in the Colville River delta with satellite operations on leases in the NPR-A.

The Trans-Alaska Oil Pipeline from Prudhoe to Valdez, crossing the Yukon River along the way, and the associated Dalton Haul Road are major environmental insults to wilderness and nature associated with oil development on the Arctic coast east ofNPR-A. Now there are also off-shore developments in the Beaufort Sea and prospective development in the Chukchi Sea where apparently a large reservoir of oil and gas exists.

It is worth looking briefly at the production of the Prudhoe Bay development as a way to estimate and compare the potential benefits of oil development in the NPR-A. The Prudhoe oil reserves were originally estimated to be 25 billion barrels of recoverable oil. Between 1977 and 2005 production was 11 billion barrels, and there are said to be a remaining 2 billion barrels of producible oil at current production costs and oil prices. The oil consumption of the United States is currently about 20 million barrels per day or about 6.3 billion barrels per year. Thus, in 30 years of effort and the expenditure of billions of dollars for infrastructure, operations, and maintenance, this oil field has produced the equivalent of about two years of supply for our Nation! It must be profitable for oil companies to make this effort, as otherwise they would not do it, but in the grand scheme of things it seems like a rather puny benefit for the American people as a whole.

Now consider what is potential from the NPR-A. In 2002 the USGS estimated that there were 10.6 billion barrels of recoverable oil in the NPR-A; but after further research and modeling in 2010 USGS drastically revised its estimate down to only 896 million [yes, million] barrels of technically recoverable oil in the NPR-A, and perhaps 500 to 600 million barrels are producible (profitable) under current economic conditions. Most of the identified reservoirs are in the NE planning zone immediately to the west of the Colville River around Teshekpuk Lake and southward. Reservoirs estimated to contain 100 million barrels or more are few and widely scattered. They can be produced only by stepwise connections to existing infrastructure [pipelines and roads] reaching back to the Kuparuk and Prudhoe installations and to the TransAlaska pipeline, spreading a spider web of interconnecting pipelines and roads over the landscape. Recent aerial photographs of the region from Prudhoe Bay to the Colville delta reveal this pattern of development quite clearly. This is one way eventually to reach the 100 million barrels of oil estimated to be at Umiat, at a uniquely shallow depth. The other would be to build a road and pipeline from the Trans-Alaska pipeline to Umiat with bridges crossing several major rivers, as proposed by the State of Alaska. Neither of these alternatives is environmentally acceptable, and they should be resisted by BLM at whatever political cost it takes.

So, the NPR-A now has an estimated total capacity to produce about 30 days worth of oil for our national consumption! Is it really worth sacrificing the wilderness and natural values of this region for such a paltry amount of oil? Even if the USGS estimate is low by a factor of5, we are still looking at less than half a year's supply of oil from the NPR-A. The American people have been hornswoggled for decades about the importance of the NPR-A as a source of oil.

Yes, there apparently is a lot of natural gas in the NPR-A and elsewhere on the Arctic Slope and probably under the Arctic Ocean, although it is unclear how these high-sounding quantities stack up against sources elsewhere. Someday these sources of energy may need to be tapped, but not now. It turns out that natural gas occurs just about everywhere in North America, including Canada and much of the Lower-48 States. **[78.001]** Currently the Nation is oversupplied with natural gas, and we have exceeded our capacity to use it and store it. The only possible justification for producing natural gas on the Arctic Slope would be for local use in Alaska, and how economically feasible that would be is a big question that I guess the petroleum industry and the State of Alaska will eventually answer for us.

Finally, there is the recently touted 30 billion barrels of "oil equivalents" under the Chukchi Sea near Wainwright and speculations about a pipeline and road running right across the east-west length of the NPR-A to connect up in some way with the Trans-Alaska pipeline. It seems unlikely that production from this source of petroleum could be up and running in fewer than 20- 30 years from now. In that period of time estimates from the effects of global warming

indicate that the pack ice in the Arctic Ocean will have largely melted away, opening up sea lanes for shipping [including oil tankers] to ports all around the world. Thus, if we bide our time, a pipeline across the NPR-A will become redundant.

What all of these changes in thinking, resulting from recent knowledge, seem to be telling us is that BLM should be re-evaluating its modus operandi based on the "multiple use principle" to emphasize management and protection of the renewable, natural resources as its first priority and the use of non-renewable resources as secondary. Unfortunately for some people, but fortunately for others, the NPR-A was originally established in the wrong place. Early explorers and geologists were misled to think that the Barrow region was where the oil is, because of intriguing surface indications, such as the oil seeps at Cape Simpson, which I saw in 1952 while searching for a polar bear with Ira Wiggins and Robert Raush. In hindsight we know that the Reserve should have been located to the east of the Colville River.

[78.002] Since petroleum is not the forte of the NPR-A that it was once thought to be, BLM is now free to consider what else is important about the 23 million acres under its management. As I have suggested several times in the past 20 years, the NPR-A should be re-designated as the principal component of a coalition of land owners that could band together to create an Alaskan Arctic Tundra Biome Reserve, in which "maximum protection" of the natural landscape and renewable surface resources would be the main goal and which would extend from the Arctic coast between the Colville River and Point Hope southward into the Brook Range, thus preserving a continuous swath of coastal plain, foothill, and alpine tundra ecosystems. It could become a great natural laboratory for scientific study of the effects of global warming and climate change on meteorological, geophysical, biotic, and sociological processes in the Arctic and as a recreational region where visitors can go for a time to experience true wilderness but then leave. These objectives should be the chief goal, and BLM should be the major player. Alternative B of this draft IAP-EIS, if accepted, would move us a little bit in the right direction.

[Preamble 78.003, 004, 005, 006] As far as the four alternatives in this Draft IAPIEIS are concerned, I would say that the absolute minimum protections in the final IAP and ROD should include: **[78.003]** a) no hard rock mining anywhere in the reserve as currently mandated by law, **[78.004]** b) no coal mining, **[78.005]** c) no public access to any roads constructed in the NPR-A, except for special, permitted purposes such as scientific research, d) strict adherence and monitoring of all stipulations established for development activities associated with oil and gas exploration and production, and **[78.006]** e) no pipeline and road corridor across the NPR-A from Wainwright to an access point to the Trans-Alaska pipeline. The latter would be the kiss of death for the wilderness values of this region and should be resisted at all political costs. If the State of Alaska succeeds in its pernicious plan to construct a permanent gravel road from the Dalton Highway to Umiat with a bridge across the Colville, BLM should make sure that any public access on this road stops at the Umiat runway and is not allowed into the NPR-A proper. Beyond these barebones requirements, we can also hope for other things, such as the "unavailable for leasing" designation, special areas, and recommendations for wild and scenic rivers.

Obviously from the standpoint of "maximum protection," Alternative B is the most attractive to conservationists and with some additions is the one that should be adopted for the final IAP and ROD. In looking at Maps 2-2 and 2-2T, I was surprised to see how generously the "unavailable" designation has been applied-although since you have not identified a "preferred alternative" it is difficult to know how seriously BLM takes the particulars set forth in Alternative B. Let us hope that Alternative B is not just window dressing. I do think that application of the unavailable designation to the Teshekpuk Lake Special Area and environs will be politically difficult to uphold, because of the known oil and gas reservoirs in that area, existing leases there, and relatively easy connection back to the Trans-Alaska pipeline. Good luck on that one if you seriously intend to try. Perhaps Teshekpuk will end up looking more like Alternative C, since you have allowed yourselves the freedom to pick and choose among the four alternatives.

[78.007] On the other hand, I wonder why the unavailable designation has not been applied to the Colville River Special Area and to the upper Ikpikpuk River and tributaries. Both of these areas need all of the protection they can get, and except for the Alpine field and the 100 million barrels or so of oil at Umiat [state owned anyway?] I am unaware of significant, potentially producible sources of oil or gas along these rivers. In any case, it is likely that offers of additional lease sales will reveal the growing reluctance of the oil companies to become involved in work much beyond the Alpine field.

[78.008] It is encouraging to see one additional Special Area, Peard Bay, recommended in Alternative B. This special area should be extended to include the lower Meade River and delta and Admiralty Bay [Dease Inlet], where large numbers of shorebirds and waterfowl occur. Much of this area has been designated as unavailable for leasing in Alternative B.

[Preamble 78.009] The Colville River Special Area looks good, especially the recommended set-back of 2 miles for facilities, as earlier suggested by National Audubon and me. Also, recognition of the cliff habitats along the river as important to other raptors in addition to the Peregrine Falcon is an important further emphasis on the significance of these formations. **[78.009]** Ravens and Canada Geese should also be included. The geese frequently nest on the cliffs and bluffs among the nesting raptors, perhaps seeking protection from predators such as foxes, wolverines, and jaegers, which the raptors drive away. **[78.010]** One thing I wonder about is whether the boundaries of this Special Area around the Kikiakrorak and Kogosukruk Rivers, where Peregrines nest in high density, could be made confluent with each other between the two rivers. This change would offer additional protection to these rather easily disturbed nest sites, which can often be walked right up to, and would reduce the complexity of the boundary in this area. **[78.011]** There is also still the problem of protecting the cliff-lined, right limit of the Colville River between the mouth of the Etivluk River and Umiat, a stretch that lies outside the Reserve and is in native ownership. This raptor habitat could be protected by an easement or some kind of cooperative agreement with the owners, an idea that should at least be included in the final IAP as a recommendation for future action.

[78.012] The Ikpikpuk River and watershed have been recommended several times in the past for designation as a Special Area. This draft EIS indicates several reasons why this area is special. The border of such an area should extend south to abut the border of the Colville River Special Area. The draft EIS does not explain why this important river has not been considered for Special Area status.

[Preamble 78.013, 014] The proposed recommendation in Alternative B that Congress designate 12 Wild and Scenic Rivers is laudable, even though it is doubtful that Congress would take such action in the foreseeable future. I have only two suggestions. **[78.013]** Again, the Ikpikpuk River fulfills all the requirements for such a designation most admirably, and it should be included on any candidate list submitted to the Congress. **[78.014]** Also, the Colville River should be considered for such status for its entire length including the delta, even though portions of it are not within the NPR-A. In fact, the entire Colville River and all its tributaries should be considered, especially the beautiful Killik and Oolamnagavik Rivers [outside the NPR-A, but so what?].

A few specific points having to do mainly with Birds [Section 3.3.5] follow:

[78.015] 3.3.5.1 Seabirds-Note that the total number of species should be 10, not 9, as the Homed Puffin now breeds on Cooper Island [See papers by Divoky, mentioned on page 226 under the Black Guillemot].

[78.016] 3.3.5.2 Jaegers. Page 227-The Long-tailed Jaeger is more common in foothill and even alpine tundra than on the coastal plain. It breeds "regularly" in the foothill habitats, at least when and where microtine rodent populations are high enough. The combined populations of five species of microtines in the foothills provide a more stable food base for jaegers than the dominant brown lemming population, which undergoes drastic cycles of abundance in the coastal plain and where this one species is preyed on by about eight species of avian and

mammalian predators [see Pitelka et al. 1955 referenced at the end]. [See also Bee, 1. W. and R E. Hall, 1956, Mammals of northern Alaska on the Arctic Slope, Misc. Publ. no. 8, Univ. of Kansas Museum of Nat. History; and Kessel and Cade 1958.]

[78.017] 3.3.5.7 Raptors. In your considerations about the potential impacts of global warming and climate change on raptors, especially on Gyrfalcons and Peregrines, and on ptarmigan, you might wish to consider information in a recently published conference proceedings: Watson, R T., T. 1. Cade, M. Fuller, G. Hunt, and E. Potapov, Editors. 2011. Gyrfalcons and Ptarmigan in a changing world. Proceedings of the Conference. Vol. I, 372 pp. Vol. IT, 400 pp. The Peregrine Fund, Boise, ID. Also accessible at www.peregrinefund.org/subsites/conference-gyr/proceedings/index. html.

Note also that both Rough-legged Hawks and Ravens sometimes build stick nests in tall willows and poplars in the Colville River watershed (Cade and White unpublished observations, 1975).

[78.018] 3.3.5.8 Ptarmigan-See reference above to potential impacts of global warming and climate change.

Following **[78.019]** 3.3.5.8 Passerines, page 256-No mention is made of the Northern Shrike (Lanius excubitor), which nests widely but uncommonly in the willow and alder habitats of the Colville River valley all the way to Ocean Point [see Cade and Swem, 1995, Ecology of Northern Shrikes nesting in arctic Alaska, Proceedings of the Western Foundation of Vertebrate Zoology 6(1):204-214]. This shrike is an uncommon to rare bird throughout its range in North America and probably should be listed as a "threatened species" under the Endangered Species Act. Certainly it is a "species of special concern." The brushy habitats along the major rivers draining the Arctic Slope of Alaska provide important nesting habitat for this rare species. Also, the American Robin occurs widely and regularly as a breeder in the same habitats where shrikes occur. Sometimes these two species use each other's old nests by refurbishing them in subsequent years. I found Rusty Blackbirds (Euphagus carolinus) nesting in a swampy willow area near the runway at Umiat in 1989 (unpublished notes). I think this is a new breeding record for the Arctic Slope.

3.3.5.8 Birds and Climate Change. See reference above.

[78.020] 3.3.6, Table 3-19. Terrestrial Mammals-The generic name of the Red-backed Vole has been changed from Clethrionomys back to Evotomys, the name that C. Hart Merriam and his boys in the old U.S. Biological Survey used. Far from being "rare or accidental," this vole is widespread and common in the alder and birch shrubbery of the Colville River valley and elsewhere. I trapped plenty of them for Frank Pitelka at Umiat in the 1950s, and so did Jim Bee [see Bee and Hall referenced above]. Also, the Brown Lemming is more common than the Collared Lemming, even in the foothills, where they occur around lakes and along wet drainages. Your glaring omission of any description and discussion of this most important gild of herbivores (microtine rodents) is a mistake that needs to be corrected. The impact of these rodents on ecosystem functions in the coastal plain and foothills is likely greater than that of caribou, which receive 13 pages of consideration. Take some of those pages away from caribou and devote them to the importance of rodents. You can begin with Pitelka et al., 1955, Ecological relations of jaegers and owls as lemming predators near Barrow, Alaska, Ecological Monographs 25 :85-117, and go from there.

Sincerely yours,

Tom J. Cade
6484 Hollilynn Dr.
Boise, ID 83709

[Response to 78.001]
Development of petroleum resources in the NPR-A can take ten to twenty years of planning and exploration before any production occurs. While natural gas supplies are currently adequate, it is possible that it will be used in different ways and at a faster rate than expected, resulting in a shortage in the future. Planning for development within NPR-A now allows orderly and environmentally-sustainable development when it is economically feasible.

[Response to 78.002]
This suggestion is beyond the scope of the NPR-A IAP/EIS, as defined in the Purpose and Need (Section 1.1). Also see sections 2.4.1 and 2.4.6.

[Response to 78.003]
The BLM has determined that it would not recommend legislation to allow hardrock and coal mining as part of this plan. For a discussion of that determination, see section 2.4.3.

[Response to 78.004]
The BLM has determined that it would not recommend legislation to allow hardrock and coal mining as part of this plan. For a discussion of that determination, see section 2.4.3.

[Response to 78.005]
It is appropriate to make decisions regarding the use of privately built roads in the course of addressing site-specific proposals. Decisions could be affected by the proximity of the road, including potential connection, to villages or other transportation facilities.

[Response to 78.006]
One of the purposes of the plan is to provide for the opportunity for necessary infrastructure across the NPR-A in support of Chukchi Sea development. Therefore, this suggestion does not meet the purpose of the plan and is beyond its scope.

[Response to 78.007]
The IAP/EIS maintains special protections in the Colville River Special Area. Both the Colville and Ikpikpuk Rivers have setbacks established for oil and gas leasing. See Stipulation/BMP K-1 in Table 2-3. The BLM considers these protections appropriate.

[Response to 78.008]
The BLM considered in Alternative B a very extensive and wide range of Special Area designations. The lower Meade River and delta and Admiralty Bay and Dease Inlet are included in the enlarged Teshekpuk Lake Special Area in Alternatives B-1 and B-2.

[Response to 78.009]
The BLM acknowledges that Canada geese and ravens also use the bluffs along the Colville River for nesting. See discussion of Canada geese in Chapter 3, Affected Environment, Section 3.3.5.5. See discussion of common ravens in Chapter 3, Affected Environment, Section 3.3.5.8. Canada geese primarily occur on the Arctic Coastal Plain of the NPR-A and the population is growing and showing signs of range expansion (Larned et al. 2011). Canada geese nesting on cliff bluffs along rivers comprise a very small portion of the overall population in the NPR-A. Ravens occur in low numbers throughout the NPR-A with their primary nesting habitat being along river bluffs although in recent years a small number of ravens have used manmade structures for nesting sites. Ravens are very plastic in their nesting requirements and are able to utilize a much broader suite of nesting sites than do gyrfalcons and peregrine falcons. Thus, BLM did not find it necessary to include Canada geese and ravens as a species to be protected by the CRSA.

[Response to 78.010]
The existing boundary areas of the CRSA are sufficient to protect peregrines nesting in cliffs along the river. See Map 3.3.5-20 for a map of nesting and activity sites. Additionally, Special Area status would not prevent individuals from walking in the area.

[Response to 78.011]
These suggestions related to lands outside of NPR-A is outside the scope of this planning effort. See section 1.1.

[Response to 78.012]
The BLM considered including portions of the Ikpikpuk River above the Teshekpuk Lake Special Area for inclusion in a Special Area. However, the BLM determined that other protections provided for resources along the river, including a 1-mile setback for much to its headwaters, provided adequate protection.

[Response to 78.013]
The decision not to reconsider the earlier nonsuitability decision for the Ikpikpuk was within the discretion described in the BLM Manual (MS-6400 4.1.A, BLM 2012).

[Response to 78.014]
The decision not to reconsider the earlier nonsuitability decision for the lower Colville River was within the discretion described in the BLM Manual (MS-6400 4.1.A, BLM 2012).

[Response to 78.015]
Section 3.3.5.1 has been edited to respond to the comment.

[Response to 78.016]
Section 3.3.5.2 has been edited to respond to the comment.

[Response to 78.017]
Section 3.3.5.7 has been edited to respond to the comment.

[Response to 78.018]
Edits were made in Section 3.3.5.7 that address this comment.

[Response to 78.019]
Some of the most common species of passerines are named in this IAP/EIS. Naming and describing every passerine that used the area, however, is not necessary to appropriately address impacts that may occur from this plan.

[Response to 78.020]
The table of mammal species present in the NPR-A has been revised to reflect these corrections.

The microtine rodents are a very important component of the NPR-A's (and entire North Slope) ecosystems. However, an EIS is not intended to be an encyclopedic natural history of the area. Rather, the EIS is meant to analyze the impacts of an action on the quality of the human environment. Rodent populations play important roles in tundra nutrient cycling and as prey for many avian and mammalian species. As such, they have only an indirect (not direct) effect on the human environment through their relationships with environmental components that humans directly use. Since there is no suggestion that any of the alternatives would have population level effects on any of these rodent species, impacts on them were not analyzed under "environmental consequences." Given that, there was no need to describe them with any detail in the "affected environment" section.

COMMUNICATION NUMBER 79
Tom Campion

May 2,2012

Honorable Bob Abbey
Director of Bureau of land Management
BlM Washington Office
1849 C Street NW, Rm. 5665
Washington DC 20240

Dear Director Abbey:

At 23.5 million acres, the National Petroleum Reserve - Alaska is our nation's largest single unit of public land. The NPR-A harbors rich, vital wild lands arid wildlife such as the Teshekpuk lake Caribou Herd, millions of migratory birds, grizzly bears, threatened polar bears, walrus, wolves, endangered beluga whales, and more. There must be a balanced plan that protects special areas, while allowing for responsible oil and gas development in some areas.

I've had the great American experience of traveling through the NPRA many times. From Teshekpuk Lake to the Utukok Uplands, these areas are of the highest wilderness quality.

They are by far equal to or surass any existing big "W" Wilderness that exists in the United States. They provide not only pristine wildlife habitat but exceptional recreational opportunity. They should never be developed!

Additional areas, besides T-Lake and the Utukok with the highest conservation value must also be kept off-limits to oil and gas leasing and development. These include: Upper Colville River, Kasegaluk lagoon, Dease Inlet, Meade River, Peard Bay, Delong Mountains, and Arctic Foothills. These areas are of unparalleled subsistence, recreational, fish and wildlife, and historic value, and we would like ensure that they continue to be protected for future generations. For this reason, we strongly urge you to adopt Alternative B in order to provide the most responsible and balanced management plan for the Reserve - in order to safeguard key habitat areas that are vital to healthy wildlife populations in America's Arctic.

The protections under Alternative B are essential and appropriate to ensure balanced management of the Reserve, and protect the following special places with incredible wild lands, wildlife and waters: Teshekpuk lake and Dease Inlet to protect the calving grounds of the Teshekpuk lake caribou herd, which is designated as a globallysignificant Important Bird Area with shorebirds, waterfowl and seabirds; Peard Bay and surrounding wetlands to protect a concentration area for multiple marine mammal species and concentrated nesting area for waterbirds; Utukok River Uplands and Delong Mountains to protect the calving grounds of the Western Arctic caribou herd and habitat for various predators including grizzly bear, wolves and wolverine; the Colville River to protect exceptional densities of cliff-nesting raptors; and Kasegaluk lagoon to protect a unique coastal area vital to polar bear, walrus, ice seals, and beluga whales as well as an area designated as a globally-significant Important Bird Area. **[Preamble 79.002, 003]** Given the four choices presented, I am supportive of Alternative B; however, I strongly believe that these protections do not go far enough. I would offer a plea for additional protections; including:

[79.001] Roadless Development. The most damaging aspect of oil and gas development is the construction and use of permanent roads. Roads are disruptive to wildlife, and they inevitably encourage and promote activity unrelated to oil and gas development. Virtually without exception, road networks, initially promoted as limited in scope, gradually metastasize into wide area road networks, degrading natural areas, harming wildlife, and promoting other forms of incompatible development. Roadless development should be adopted for these sensitive areas, including ice roads, rolligons, helicopter transport and extended reach drilling.

[79.002] Stronger Designation for special areas. The special areas recommended in Alternative B are a good start. However, the limitations of the Special Area designation are real, making for a very weak result. The BlM recognizes this, noting in the document "Special Area designation does not itself impede oil and gas development' and that the designation" does not impose specific protections." The document should be redrafted to address a true administration policy for meaningful permanent protection of Teshekpuk lake, the Utukok Highlands, and the other special areas proposed in Option B.

[79.003] EIS should not promote Infrastructure for Chukchi Sea Oil and Gas Leases. The draft EIS makes it clear, stating repeatedly throughout the document, that BlM has planned the four alternatives to include space for onshore infrastructure to deliver oil and gas discoveries from the Chukchi Sea onshore into the western NPRA and then eastward across NPRA to Trans-Alaska Pipeline System at Prudhoe Bay. This document should be redrafted to clearly state that BlM has no policy or preference as to mode of transmission, that infrastructure options are a critical consideration, and that the BLM will in timely fashion, sooner rather than later, undertake a planning exercise that is not tilted in favor of any alternative advanced and advocated by energy companies or the state of Alaska.

Thank you for your efforts to find a balance between safeguarding ecological values and providing additional leasing opportunities in the Reserve.

Sincerely,

Tom Campion
Chairman, Zumiez Inc.

[Response to 79.001]
Both economic and environmental concerns have led oil companies to minimize gravel road construction on the North Slope. The Alpine field, for example, includes roads linking its central processing facility, most satellite production pads, and an airstrip. While not completely "roadless"—a term sometimes used to describe developments such as Alpine and Badami—these complexes are not linked by gravel road to the major North Slope facilities that are linked by the spine road to the Dalton Highway. It is assumed that future activities in the NPR-A would follow the example of these development projects. Moreover, required operating procedure/best management practice E-5 mandates that the development footprint be minimized.

Note, however, one of the purposes of this plan is to provide the opportunity to construct necessary infrastructure to support bringing oil and gas resources from the Chukchi Sea to TAPS and/or a future gas pipeline. This infrastructure may require a road that would link NPR-A to the Dalton Highway area. To prohibit such a road would be contrary to one of the stated purposes of the plan. Decisions on the extent to which gravel roads would be employed for any development are best made in the context of an actual proposal and will be made jointly by multiple permitting agencies.

[Response to 79.002]
The NPR-A IAP/EIS provides broad objectives for the Special Areas. In addition, it provides more specific objectives and requirements/standards for areas within Special Areas with particular value to resources. See the K series of stipulations and required operating procedures/best management practices. "Permanent protection" such as might be provided through designation as Wilderness or inclusion in the National Wildlife Refuge, were considered but eliminated from detailed analysis. See section 2.4.

[Response to 79.003]
The IAP/EIS makes no decisions regarding Chukchi Sea development. If an application for development is received, the BLM will address a reasonable range of alternatives regarding the location and major components of the infrastructure. The IAP/EIS appropriately discusses the potential cumulative impacts of offshore development, including the potential for that development to include onshore infrastructure in NPR-A.

COMMUNICATION NUMBER 80
J. Capozzelli

April 26, 2012

Bureau of Land Management
NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

RE: Please Support an Improved Alternative B Management Plan for the National Petroleum Reserve-Alaska

As you consider the first-ever comprehensive management plan for National Petroleum Reserve-Alaska (Reserve) on the north slope of Alaska, I ask that you adopt a final plan that properly balances future oil and gas development in the Arctic with strong protections for special habitat areas in the Reserve, especially the lands surrounding Teshekpuk Lake and other identified Special Areas, such as Kasegaluk Lagoon and the Utukok Uplands.

Teshekpuk Lake is the largest lake in America's Arctic, and the surrounding Special Area includes wetlands, coastline and barrier islands that provide some of the most valuable habitat for caribou and migratory birds in the entire circumpolar Arctic. Birds that breed, forage, and stage in the Teshekpuk Lake area migrate south along all major flyways to overwinter in locations throughout the Lower 48 states from coast to coast.

Across the Arctic, some caribou herds are facing troubling declines as rising temperatures threaten the wild landscapes on which they depend. To make matters worse, drilling proponents are pressing to expand oil and gas development into the National Petroleum Reserve-Alaska, where important caribou habitat would be lost to roads, pipelines, and drilling operations that would cross this wild landscape. In addition to caribou, the Reserve also provides habitat for millions of nesting migratory birds, as well as grizzly and polar bears, wolves, and more.

While Alternative B is the most environmentally protective alternative analyzed by the Bureau of Land Management and is an improvement over previous plans, it still allows over 11 million acres of ecologically intact wilderness-quality lands to be leased for oil development.

As the BLM develops the "integrated activity plan" and "final environmental impact statement" for the reserve, I urge you to provide maximum protection for areas with high-value habitats by designating all of the Special Area contained in Alternative B, and to create additional protections for all other areas in the reserve that contain ecologically intact and/or wilderness-quality lands.

[80.001] The BLM must also consider the long-term impacts of greenhouse gas emissions from oil and gas development, and any future impacts of climate change on the low-lying western Arctic. Arctic animals are already stressed by a melting and warming Arctic, and none of the alternatives considered go far enough to protect these species from the wide array of impacts from oil and gas development. Among other things, the bureau must account for sea-level rise due to ice melt, permafrost collapse, coastal erosion and increased high-energy storm events that will degrade, or wipe out, critical coastal habitat, including the Teshekpuk Lake area. The bureau must also consider the impacts of ocean acidification, changes in circulation, increased freshening due to sea ice melt, and shifts in productivity to the marine environment and to marine species, including polar bears, ice seals, walruses, bowhead whales, and beluga whales.

Page Two

Congress has required that "maximum protection" be given to Special Areas in the reserve. I urgently ask the BLM to adopt an alternative that provides protections for these areas, which include Teshekpuk Lake, the Colville River, Kasegaluk Lagoon, and the Utukok River Uplands.

The BLM must also protect the Dease Inlet-Meade River area, Peard Bay and adjacent wetlands, and the Ikpikpuk River and adjacent wetlands. I implore the BLM to adopt a management alternative that includes the strongest possible protections for the Western Arctic Reserve. This means designating Alternative B as the preferred alternative, and adding additional protective measures for important wildlife habitat and wilderness areas so they are not destroyed by ecologically devastating oil and gas development, or from the long-term impacts of greenhouse gas emissions and climate change.

The coastal plain wilderness of the Western Arctic Reserve in Alaska is a globally recognized ecological resource, supporting high densities of breeding birds, imperiled polar bears, caribou and wolverines. Whales, walruses and seals also call its shores and lagoons home. It deserves our highest regard and care.

Thank you for your help on behalf of America's irreplaceable lands and wildlife.

Yours truly,
J. Capozzelli
New York

[Response to 80.001]
The BLM analyzed the effects of climate change which were within the scope of the planning effort. The direct and indirect impacts to resources are found for each resource (4.3-4.7). When compared to the total U.S. and worldwide emissions of carbon dioxide, each alternative would contribute miniscule amounts of direct emissions to national levels. Thus, activity in the NPR-A itself will not have a significant impact on climate change.

COMMUNICATION NUMBER 81
Ronald Clarke

Ronald G. Clarke
P.O. Box 22372
Juneau, AK 99802

14 June 2012

NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99513

Via http://www.blm.gov/ak

Re: National Petroleum Reserve-Alaska (NPR-A) Integrated Activity Plan/Environmental Statement (IAP/EIS)

Dear BLM Planners:

Thank you for the extending your earlier deadline and offering a greater opportunity to comment on the Draft IAP/EIS for the NPR-A. As a biologist with 35 years of experience in Alaska, I urge you to adopt Alternative B. At minimum, I encourage you to protect the unique natural qualities of this region by:
1) disallowing hard rock mining anywhere in the reserve as currently mandated by law;
2) prohibiting coal mining;
3) preventing construction of any new roads in the NPR-A, except for special, permitted purposes such as scientific research;
4) adhering strictly to and monitor all stipulations established for development activities associated with oil and gas exploration and production; and
5) preventing designation of any pipeline and/or road corridors across the NPR-A.

The Draft IAP/EIS is a comprehensive, detailed catalogue of information on this important region of arctic Alaska. When adopted, it will provide an excellent foundation for the BLM to manage for multiple uses on the millions of acres of the NPR-A and fulfilling the agency's mandate to provide maximum protection to the landscape and renewable surface resources consistent with the exploration and development of nonrenewable, subsurface resources. Its boundaries encompass the largest portion of the unique, coastal plain tundra in Arctic Alaska, as well as much of the northern and southern foothills up to the Brooks Range. Except for the coastal villages, Native and state lands lie mostly to the south and east of the Colville River, which delimits part of the southern and all of the eastern boundary of the Reserve.

Since 1976-77 there has been a major industrial development for oil on the coastal plain beginning at Prudhoe Bay with later extensions westward to the Kuparuk River, and most recently to Alpine in the Colville River delta with satellite operations on leases in the NPR-A. The Trans-Alaska Oil Pipeline from Prudhoe to Valdez, crossing the Yukon River along the way, and the associated Dalton Haul Road are major environmental insults to wilderness and nature associated with oil development on the Arctic coast east of NPR-A. Now there are also off-shore developments in the Beaufort Sea and prospective development in the Chukchi Sea where apparently a large reservoir of oil and gas exists.

The history of Prudhoe Bay offers a likely comparison to how oil and gas development might proceed in the NPR-A. Originally estimated at 25 billion barrels of recoverable oil, the Prudhoe field actually produced some 11 billion barrels between 1977 and 2005. At current production costs and worldwide prices, experts estimate about 2 billion barrels of recoverable oil remain. Since at present, the United States uses about 20 million barrels per day - about 6.3 billion barrels per year - this means after three decades and billions of dollars of investment, this

massive field produced about two years' worth of oil for the country. Surely, the oil companies have profited greatly through this enterprise, but the benefit to the nation overall is modest at best.

In 2002, the USGS estimated there were 10.6 billion barrels of recoverable oil in the NPR-A. More sophisticated research in 2010 convinced the USGS to revise its estimate significantly downward to only 896 million barrels of technically recoverable oil in the NPR-A. In terms of profitable production under present economic conditions, there are only 500 - 600 million barrels. Most of the identified reservoirs are in the northeast planning zone, west of the Colville River around Teshekpuk Lake and southward.

Presumed reservoirs of 100 million barrels or more are few, widely scattered, and could be developed by making new connections to existing pipelines and roads linking Kuparuk and Prudhoe installations to the Trans-Alaska pipeline. High-altitude photographs of the region from Prudhoe Bay to the Colville delta show a spreading pattern of a web of interconnecting pipelines and roads. Another way to reach the estimated 100 million barrels of shallow oil at Umiat, at a uniquely shallow depth, would be to build a road and pipeline from the trans-Alaska pipeline with bridges crossing several major rivers, as proposed by the State of Alaska.

Given the limited benefit potentially available - about thirty days' worth of national consumption - I believe neither alternative is environmentally acceptable. The BLM should strongly resist them, and work to correct a widespread misconception about the amount of oil potentially recoverable from the NPR-A.

Natural gas reserves in the NPR-A and across the arctic may or may not be economically recoverable, especially in light of increasing production in the Lower 48 states. The United States is presently oversupplied with natural gas to the extent we have exceeded our capacity to use and store it. Producing natural gas in arctic Alaska may prove feasible for local use in Alaska, but many economic questions remain unanswered.

Recently touted estimates of 30 billion barrels of so-called oil equivalents under the Chukchi Sea near Wainwright have prompted speculation about a pipeline across the length of the NPR-A somehow connecting with the Trans-Alaska pipeline. Production from this source of petroleum is unlikely to become reality in fewer than 20 or 30 years. Given the rapid retreat of ice from the Arctic Ocean, sea lanes may well be open to shipping by then, and a pipeline would be unnecessary.

Against that background, the BLM must consider what would be lost if these areas were opened to petroleum development. The area's unique natural riches are unequalled in the world and deserve lasting protection. The BLM should seriously consider redesignating the NPR-A as the principal component of an Arctic Tundra Biome Reserve, offering maximum protection to the natural landscape and renewable surface resources and resisting the development of every last shred of non-renewable subsurface resources, possible only through the destruction of everything else. The BLM could spearhead preservation of a wide, continuous expanse of coastal plain, foothill, and alpine tundra ecosystems, extending from the Arctic coast between the Colville River and Point Hope southward into the Brooks Range. Such a reserve would be an extremely valuable natural laboratory for scientific study of the effects of global warming and climate change on meteorological, geophysical, biotic, and sociological processes in the Arctic, and as a recreational region where visitors could experience true wilderness. These objectives should be the chief goal, and BLM should be the major player. Alternative B of this draft IAP-EIS, if accepted, would move us a little bit in the right direction.

If the State of Alaska succeeds in constructing a permanent gravel road from the Dalton Highway to Umiat with a bridge across the Colville River, the BLM should ensure that public access stops at the Umiat runway and is not allowed into the NPR-A proper.

Alternative B is most likely to offer maximum protection to the area's unique and valuable natural landscapes. With some additions, such as the unavailable for leasing designation,

special areas, and recommendations for wild and scenic rivers, the BLM should adopt Alternative B for the final IAP and ROD. Application of the unavailable designation to the Teshekpuk Lake Special Area will be politically difficult because of the known oil and gas reservoirs in the area, existing leases there, and relatively easy connections back to the Trans-Alaska pipeline, but I encourage the agency to try. It is puzzling that the BLM has not applied the unavailable designation to the Colville River Special Area nor to the upper Ikpikpuk River and tributaries. Both of these areas deserve extra protection and are apparently free of recoverable reserves of oil, except for the Alpine field and the 100 million or so barrels of state-owned oil estimated to exist at Umiat.

Thank you for recommending the Peard Bay Special Area in Alternative B. I suggest the agency expand it to include the lower Meade River and delta and Admiralty Bay (Dease Inlet), where large numbers of shorebirds and waterfowl occur. Much of this area has already been designated as unavailable for leasing in Alternative B.

[81.001] The Colville River Special Area recommendation is encouraging, especially the set-back of two miles for facilities. I also appreciate the recognition of cliff habitats along the river as important to other raptor species in addition to the peregrine falcon. The agency's emphasis on the significance of these formations is encouraging, indeed. The agency should also include ravens and Canada geese. The geese frequently nest on the cliffs and bluffs among the nesting raptors, perhaps seeking protection from predators such as foxes, wolverines, and jaegers, which the raptors drive away. The boundaries of this Special Area around the Kikiakrorak and Kogosukruk Rivers, where Peregrines nest in high density, could be made confluent with each other between the two rivers. Nest sites along this corridor are easily disturbed, and changing the boundary in this way would both protect the sites and simplify mapping, monitoring, and enforcement. Raptor habitat along the Colville River between the mouth of the Etivluk River and Umiat, a stretch that lies outside the Reserve and is in Native ownership, could be protected by designating a conservation easement or executing a cooperative agreement with landowners. The BLM should include this suggestion in the final IAP as a recommendation for future action.

The draft gives several reasons why the Ikpikpuk River and watershed area is worthy of attention, and deserving of designation as a Special Area. The border of such an area should extend south to abut the border of the Colville River Special Area. The draft should explain why this important river has not been considered for Special Area status.

I support the agency's Alternative B recommendation that Congress designate twelve Wild and Scenic Rivers. I suggest that because the Ikpikpuk River fulfills all the requirements for such a designation, it should be included on any list of candidate rivers submitted to Congress. Further, the BLM should suggest similar status for the entire length of the Colville River, including the delta, even though portions of it are not within the NPR-A. In fact, the agency would do well to propose this protection for the entire Colville River and all of its tributaries, especially the Killik and Oolamnagavik Rivers.

Thank you for considering my views.

Sincerely yours,

Ronald G. Clarke

[Response to 81.001]
The BLM acknowledges that Canada geese and ravens also use the bluffs along the Colville River for nesting. See discussion of Canada geese in Chapter 3, Affected Environment, Section 3.3.5.5. See discussion of common ravens in Chapter 3, Affected Environment, Section 3.3.5.8. Canada geese primarily occur on the Arctic Coastal Plain of the NPR-A and the population is growing and showing signs of range expansion (Larned et al. 2011). Canada geese nesting on cliff bluffs along rivers comprise a very small portion of the overall population in the NPR-A. Ravens occur in low numbers throughout the NPR-A with their primary nesting habitat being along river bluffs although in recent years a small number of ravens have used manmade structures for nesting sites. Ravens are very plastic in their nesting requirements and are able to utilize a much broader suite of nesting sites than do gyrfalcons and peregrine falcons. Thus, BLM did not find it necessary to include Canada geese and ravens as a species to be protected by the Colville River Special Area.

The IAP/EIS maintains special protections in the Colville River Special Area. Both the Colville and Ikpikpuk Rivers have setbacks established for oil and gas leasing. See Stipulation/BMP K-1 in Table 2-3.

COMMUNICATION NUMBER 82
Sean Cochrane

The BLM should adopt Alternative D as its Preferred Alternative. The title says it all - National Petroleum Reserve. The area that is subject to this review has a specified purpose in that it is intended for oil and gas development. The only alternative that is offered that is truly consistent with this is Alternative D which opens all of NPR-A's subsurface to oil and gas leasing, while protecting the surface with appropriate mitigation.

[82.001] Conversely, each of the other alternatives is inconsistent with the stated purpose of the National Petroleum Reserve as they ultimately block development of onshore energy deposits as well as infrastructure necessary to connect offshore resources to TAPS. In fact, those alternatives appear to change land management in NPR-A from multiple use to conservation. This does not make sense as this is an area intended for oil and gas development.

As an Alaskan, I understand the importance of protecting our natural resources and beauty and believe we do a very good job at it because this is where we live. I am frankly offended by the prevailing view outside of Alaska that we need to be protected from ourselves. This has led to a disproportionate amount of public lands already closed to development and a continuing effort by government and NGOs to increase that area.

I encourage you to do the right thing and adopt Alternative D

[Response to 82.001]
The IAP/EIS properly acknowledges and fulfills the BLM's responsibility for management of NPR-A. For a discussion of BLM's responsibilities consistent with law, see particularly sections 1.1 and 1.5.

COMMUNICATION NUMBER 83
Art Greenwalt

Urge the BLM to adopt Alternative B in the final plan. This is the only alternative in the draft plan that properly balances future oil and gas development in some areas with strong and reliably effective protections for the exceptional wildlife habitats, subsistence resources, wild river and wilderness values of the NPR-A that are within Alt. B's Special Areas.

Insist on safeguarding the entire expanded Teshekpuk Lake Special Area as unavailable for leasing, including the critical calving and insect relief areas as well as globally significant important bird areas for molting and nesting in wetlands areas around the lake. Alt. B is the only one that makes the whole area (not just the lake bed) unavailable for leasing.

Underscore the importance of protecting coastal areas like the Peard Bay(a new Special Area) and Kasegaluk Lagoon Special Areas for marine life and subsistence users.

Protect the wildest country in the southern part of the Reserve in the Upper Colville River and expanded Utukok Uplands Special Area covering the DeLong Mountains/Arctic Foothills. These areas of lower oil and gas potential support calving, insect relief and migration routes of the Western Arctic caribou herd, as well as key habitat for wolves, wolverines and bears.

Support managing lands for their wilderness characteristics, especially for Special Areas in the prior South plan area (expanded Utukok Uplands and Upper Colville River), and for values like recreation, solitude, and intact ecosystems throughout the Reserve leasing.

Support Alt. B because it is the only alternative that provides adequate conservation measures to protect wildlife and their habitats by making key Special Areas unavailable for leasing which correctly includes protecting the surface from permanent industrial infrastructure including roads, pipelines, and staging or support bases which pose negative impacts to fish and wildlife from direct and cumulative habitat loss, disturbance from noisy operations, and increase risks of oil spills and contamination.

Raise concern about the cumulative effects to wildlife, subsistence and other values from dangerous development like offshore oil and gas development including pipelines, roads, and staging areas within NPR-A, and from schemes like the State's of Alaska's Road to Umiat. The proposed Road to Umiat would have devastating impacts on subsistence, recreation, and the core biological values that this plan attempts to protect, and its cumulative impacts need to be fully addressed.

Support BLM's decision to keep coal and hardrock mining off-limits and outside the scope of the plan because Congress has closed it. Coal extraction would provide a new source of greenhouse gases from the most polluting fossil fuel causing global warming , and the cumulative impacts of mining and roads risk unacceptable impacts to the Western Arctic Caribou herd already subject to rapid climate change impacts.

[83.001] The Arctic is on the frontline of global climate change impacts, and the plan does a good job to acknowledge the stresses it poses to the environment. However, the draft EIS fails to quantify Greenhouse Gas Pollution emissions in the Reserve, as well as the GHG emissions from the oil and gas consumption elsewhere. The draft EIS also fails to quantify air emissions and their impacts from future the oil and gas operations in the Reserve and cumulative impacts across the North Slope and surrounding seas.

Support Alternative B's nomination of 12 Wild and Scenic Rivers: Part of the Colville, the Nigu, Etivluk, Ipnavik, Kuna, Kiligwa, Nuka, Awuna, Kokolik, and Utukok rivers and Driftwood and Carbon creeks. Wild and Scenic River status would mean protection for at least Â½ mile on each bank to protect river-related values.

[Response to 83.001]
For a discussion of quantitative analysis of air impacts, see Appendix H. The explanation of the unreliability of projecting future emissions from activities in NPR-A described in this section are also relevant to quantification of greenhouse gas emissions.

COMMUNICATION NUMBER 84
Beth Levine

The fate of Alaska's Wild Western Arctic is in your hands. I ask that you adopt the protection measures in Alternative B in the final plan which are a strong and essential step toward protecting the key wildlife habitat and public land treasures of the Reserve. And,**[84.001] I ask that you also consider a few additional protection measures to improve Alternative B that will ensure protection for additional high value habitats, including the upper watershed of Kasegaluk Lagoon, the lower Utukok River and the upper Ikpikpuk River.** I hope you think about your grandchildren and what kind of world you want for them and their grandchildren as you make this decision. And as you make this decision, I also hope you think about what kind of person you want to be for your grandchildren.

[Response to 84.001]
The BLM considered a wide range of areas for potential addition to Special Areas. Portions of all the named drainages have been included in expanded Special Areas and the major streams in these drainages have river setbacks (See Stipulation K-1) in multiple alternatives.

COMMUNICATION NUMBER 85
Debbie S. Miller

June 15, 2012

TO: Mr. Bud Cribley, BLM State Director
NPR-A IAP/EIS Comments
AECOM Project Office
1835 South Bragaw St., Suite 490
Anchorage, AK 99508

RE: Draft Integrated Activity Plan and EIS for the National Petroleum Reserve-Alaska

Dear Mr. Cribley and BLM planners:

Thank you for giving me the opportunity to review your comprehensive management plan for the National Petroleum Reserve-Alaska. Overall, I'm delighted that you've formulated management alternatives that expand the existing special areas, and establish Peard Bay as a new unit.

For the past three summers I've had the wonderful opportunity to explore the Reserve, traveling by canoe and on foot for more than 600 miles. During these travels I wrote about the magnificent landscape, wildlife, cultural history, and paleontology of the Reserve for the forthcoming book On Arctic Ground: Tracking Time in Alaska's National Petroleum Reserve (Braided River, 2012).

I traveled with a team of outstanding photographers, including Patrick Endres, Hugh Rose, and Dave Sheffler, whose pictures will be included in the first-ever photo essay book about the Reserve. This past summer I traveled down the Utukok River with author and recording artist, Richard Nelson, who has produced an excellent audio CD for this project. The public will have a chance to listen to the arctic environment as well as see it. The book is currently being printed, and I've asked that a copy be shipped directly to your office. I'd like the book to be included as part of my record of comments because my experience in the Reserve, and my writings, specifically relate to the significant fish and wildlife, recreational, historical, scenic and wilderness value of the proposed special areas.

I'm extremely pleased that BLM has expanded the Utukok and Teshekpuk Lake special areas under alternative B. These expansions will protect vital habitat for a diversity of arctic species, prime wilderness in the southern region, and 12 rivers that may one day be classified as Wild and Scenic. I canoed down four of those rivers: the Nigu, Etivluk, Colville and the Utukok. These pristine rivers are incredibly wild and free-flowing, and they are embraced by beauty from the majestic Brooks Range and northern foothills, to the sweep of grassland tundra that rolls toward the Chukchi and Beaufort Sea. The views are breathtaking and far-reaching.

The wilderness that surrounds the Nigu, Etivluk, upper Colville, and Utukok is magnificent and vast beyond measure. This great frontier landscape supports a stunning diversity of wildlife, from our largest caribou herd to the wolves and bears that we watched chase after them. My hope is that one day our nation will be wise enough to formally designate much of the Utukok River Uplands Special Area as wilderness, giving it the strongest protection possible.

Values of the proposed Utukok River Uplands Special Area under Alternative B

I've traveled and written extensively about the Arctic over the past three decades. This includes many trips and writing projects that have taken me to the Arctic National Wildlife Refuge and to Gates of the Arctic National Park. My first book, Midnight Wilderness (1990) is based on 14 years of wilderness explorations in the Arctic Refuge. Since 1975, the Arctic has been a place of great inspiration to me as a writer, but more importantly, the wilderness of the Arctic enriches my spirit and is a tremendous source of strength and wonder. I mention this because my

comments here are cast in light of this personal framework that represents many seasons of explorations.

My experiences in the proposed and expanded Utukok River Uplands Special Area could be summed up in one word: extraordinary

These are some of the key values and characteristics of the Utukok River Uplands Special Area, and why I support the idea of taking this southern region of the Reserve off the table as far as any future oil and gas leasing or development:

1) Roadless and Wild:: This vast region includes some of the wildest and most magnificent wilderness remaining on the planet. While neighboring communities might hunt, fish or recreate in this area, there are no established villages, towns or cities within the boundaries of this special area. The landscape is immense beyond imagination.

2) Isolation and Solitude: The opportunity for solitude in this quiet world, free from industrialization, is unique. This region is so remote that when you travel through it you seldom hear the sound of a distant bush plane, and there are no commercial airlines that fly over this country. Most planes follow the Haul Road corridor to Prudhoe Bay, then venture west to Barrow, along the coast. Until we reached the vicinity of Umiat, we never heard an airplane or helicopter in more than two weeks of travel. Such a wilderness experience in the context of Alaska, or in the context of North America, is extremely rare.

3) Highest Value Wilderness: In Alternative C it is noted that 4.4 million acres in the southern region have the "highest value wilderness characteristics" and that there are no oil and gas resources in this mountainous/foothill region. This is a very important point of discussion that is not mentioned in Alternative B. **[85.001]** Alternative B only generally states that lands within the expanded Utukok River Uplands Special Area with "wilderness characteristics" would be protected. If BLM has specifically identified a 4.4 million acre region as having the highest value for wilderness, and that same region lacks oil and gas resources, why was this not mentioned in Alternative B?

It seems logical, reasonable, and fitting that such a defined wilderness should be considered for wilderness classification. Such a nomination could be incorporated into Alternative B, just as BLM has appropriately nominated 12 wild and scenic rivers. There is currently no designated BLM wilderness in Alaska, and this prime 4.4 million acre wilderness would be a perfect selection as the first-ever wilderness classification for BLM lands in Alaska. Such a wilderness would be looked at as the crown jewel of BLM wilderness lands among all the western states.

Having traveled through some of this area for the past three seasons, I have to whole heartedly agree with BLM's evaluation of the wilderness character of the southernmost region of the Reserve.. The Delong Mountains and Arctic Foothills offer extraordinary scenery that teems with wildlife in a primitive wilderness setting. It is a majestic land of great beauty and forever vistas. It is the essence of frontier wilderness in America and it could be argued that because of the nature of its geography and distance from communities, this southern most region of the Reserve offers one of the most isolated wilderness settings in North America.

4) Wildlife values: during our three seasons of travels in the proposed Utukok River Uplands Special area we encountered high concentrations of caribou, bears, wolves, raptors, and a rich diversity of migratory birds, from scores of greater white-fronted and Canadian geese, to gray cheeked thrushes and yellow warblers, whimbrels and American golden plovers, horned larks, and northern wheatears, northern pintails and harlequin ducks. Along the Etivluk and upper Colville we encountered the highest densities of nesting raptors that I've ever experienced in the Arctic: rough-legged hawks, peregrines and gyrfalcons. We identified well over 50 bird species on the four drainages. On the upper Nigu we encountered wolves five days in a row, while we paddled and hiked. On the Utukok we spotted five different grizzly bears, and watched thousands of caribou with young calves cross the river. We also saw Dall Sheep and colonies of Alaska marmots in the high country, and frequent signs of wolverines, and foxes. The Utukok

Special Area offers a diversity of unaltered habitats where both migratory and resident species can flourish.

5) Historical values: Traveling through the proposed Utukok River Uplands Special Area is a humbling experience in light of the rich cultural history that dates back to 12-13,000 years ago. Along the Utukok we discovered a site where the ancestors of today's Inupiaq Eskimos crafted tools and weapons from chert. We reported our findings to BLM archeologist Michael Kuntz who later visited the site, noting that it was a new site, and that he hoped to study the area in the future.

This is a land where America's first nomadic people lived, after crossing the Bering Land Bridge. The famous Mesa site was not far from our campsites on the Nigu and Etivluk On Etivlik Lake we saw evidence of subterranean homes, some dating back thousands of years. It's no small wonder that the word "Utukok" means "something old." This region has the highest concentration of ancient archeological sites in America's Arctic. Such a place reveals important clues of how our First Americans survived in this extremely harsh environment, and it is certainly deserves a special protective status. The Utukok River Uplands Special Area reveals the historic journeys and cultural traditions of both Paleoindians and the ancestors of today's Inupiaq Eskimos. This is the oldest and finest example of the human history value of the Reserve.

6) Subsistence: While we did not encounter any subsistence hunters or fishermen during our trips in the Utukok River Uplands Special Area, yet we know this area has been used by villagers who live in nearby communities such as Pt. Hope, Pt. Lay, and Wainwright. How many places exist in America, and around the world, where residents continue to hunt, fish, and gather, living off the same lands and waters as they have for thousands of years? The Utukok River Uplands Special Area, and the Reserve as a whole, is a significant and rare place in terms of cultural history and subsistence practices that have sustained indigenous people for centuries.

In conclusion, I support Alternative B with respect to the expansion of the Utukok River Uplands Special Area, but I recommend that BLM additionally nominates the 4.4 million acre wilderness region (defined in Alternative C) as a future wilderness designation that would be enacted by Congress.

Values of the Colville River Special Area as it relates to Alternative B:

Colville River Special Area: I'm very pleased that BLM has changed the purpose of the Colville River Special Area to include the protection of all raptors along this river corridor, and not just the peregrine falcons. Having hiked and floated along many rivers in the Arctic, the Colville and Etivluk Rivers stand out as having the highest density of nesting raptors as far as frequent sightings. It was a thrill to encounter rough-legged hawks, peregrines, and gyrfalcons on a daily basis as we floated along the Etivluk and Colville rivers to Nuiqsut.

We also saw many other species of nesting songbirds and waterfowl in the Colville River Special area: Gray-cheeked Thrush, Bluethroat, Common Redpoll, American Tree Sparrow, Eastern Yellow Wagtail, Yellow Warbler, Greater White-fronted Geese, Canada Geese, Northern Pintail, Sandhill Crane, Tundra Swan, Semi-Palmated Plovers, Willow Ptarmigan, and the list goes on. The riparian environment along the Colville offers excellent habitat for nesting songbirds, while the cliffs and bluffs that flank the Colville offer prime habitat for nesting raptors. We frequently saw breeding geese and semi-palmated plovers on the gravel bars.

The paleontology value of the Colville River is significant. We discovered many plant and marine fossils along our journey including fossils with dawn redwood impressions. This is a place where you can discover dinosaur tracks imbedded in sandstone, Pleistocene mammoth tusks, and dinosaur bones ---- each year the eroding waters of the immense Colville reveal a rich fossil history that dates back to the time when duck-dilled dinosaurs roamed across the North Slope. It was amazing to see signs of life millions of years old in a place where dawn redwoods

once thrived! As a visitor you feel thrown back in time, to an age long before the human species dominated earth.

While on the Colville River we stopped at Umiat and saw the impacts of oil and gas drilling dating back to the 1940s when the Navy first began exploring for oil and gas in the Reserve. It was troubling to see the problematic landfill area, where thousands of drums and toxic wastes are buried. The manager of the Umiat field camp noted that the landfill could be declared a Superfund site. Each year the Colville erodes the southern bank and chews away into the landfill zone. Due to its location, and the fact that toxic materials can leach into the river, it's clear that the U.S. government needs to take responsibility in getting the mess cleaned up. The cost to restore this area will be high, but this is America's largest river in the Arctic which supports many species of fish. Inupiaq villagers of Nuiqsut hunt and fish on the Colville and they don't want the river or their foods to be contaminated.

[85.002] On Pg. 17 of the draft it's noted that "BLM will continue to work closely with responsible parties to encourage cleanup of contaminated and solid waste sites." This language suggests that BLM, as the governing agency of the Reserve, plans to only encourage parties to clean up sites, vs. requiring parties to take remedial action, or establishing funding priorities to fully restore sites through Congressional action. I urge you to make this language stronger and to do more than encourage parties to cleanup sites. Responsible parties, whether private or government, should be required to clean up contaminated sites. BLM should initiate planning, make priorities, seek funding, and require action that responsible parties cleanup and restore sites such as the Umiat landfill. As the governing agency of the largest tract of public land remaining in America, BLM should take leadership as far as requiring bonding, proper cleanup and restoration of contaminated sites within the Reserve.

Near Umiat there was a lot of associated noise as three helicopters were based there, along with the occasional fixed wing planes. We noticed few raptors in the river corridor just above and just below Umiat which made me wonder whether the helicopter noise was a disturbance to nesting birds. I think more consideration should be given to noise, setbacks and buffer zones in this area.

I support Alternative B with respect to the Colville River Special Area. I recommend that BLM develop a stronger plan of action that would require responsible parties to clean up and restore contaminated sites, such as the landfill site at Umiat on the Colville River.

Values of Teshekpuk Lake Special Area relating to Alternative B:

I commend BLM for expanding the Teshekpuk Lake Special Area to include more productive habitat for breeding waterfowl and shorebirds, and important habitat for the Teshekpuk Lake caribou herd. This wetlands complex is biologically the most productive region for birds in the Arctic. Recent studies reveal that the area supports the largest concentration of nesting shorebirds in the circumpolar Arctic. Other studies suggest that birds breed more successfully in the Teshekpuk Lake area than in similar wetlands around the oil fields to the east.

Oil and water don't mix. This special area is largely dominated by lakes, ponds, marshes and waterways. Oil spills would be devastating in such a pond-specked environment that supports so many nesting and molting birds. Given the new statistics on the relatively scant amount of oil in the area, BLM should continue to defer and protect the region around Teshekpuk Lake that provides critical habitat for geese, ducks, loons, swans and shorebirds.

This is an internationally significant wetlands complex for migratory birds from five continents. BLM should do all it can to defer leasing and make the most sensitive habitats unavailable for leasing. In summary, I think the best management approach for the Reserve is reflected in Alternative B. Nearly half of the Reserve would be opened to oil and gas leasing. Half of the Reserve would be off limits, protecting the most sensitive areas from leasing and industrial activity. This is a fair, reasonable and balanced approach to management that is in keeping with Congressional intent under the Naval Petroleum Reserves Production Act of 1976.

As noted above, I'd like to see BLM additionally nominate the 4.4 million acre southernmost region described in Alternative C for wilderness classification to be enacted by Congress in the future. This nomination could be added to Alternative B with the nomination of 12 Wild and Scenic Rivers.

Thank you for developing a monumental draft plan for this vast Reserve. My comments specifically relate to the special areas in the Reserve where I traveled on foot or by canoe, and I hope these recommendations help you develop a preferred alternative that will protect the most special areas in the Reserve for many years to come. Watch for the book that will be coming soon.

Sincerely,

Debbie S. Miller, Author of On Arctic Ground
1446 Hans Way
Fairbanks, AK 99709
www.debbiemilleralaska.com
debbiesmiller@hotmail.com

[Response to 85.001]
Section 2.4.1 of the IAP/EIS, "Alternatives Considered but Eliminated from Detailed Analysis," addresses this issue. The BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort, although BLM did analyze alternatives that would protect a broad range and areas of land with such wilderness characteristics. Independent of this planning effort, BLM may identify and/or make recommendations regarding designation of Wilderness within the planning area.

[Response to 85.002]
The Bureau has been proactively and successfully pursuing remediation of old sites within the NPR-A since 1977. Please refer to IAP/EIS Section 3.2.11 Solid and Hazardous Waste, Section 4.2.2.4 Spill Prevention and Response, and Section 4.8.2.2 Military Development and Distant Early Warning-Line Stations. All contamination and solid wastes issues within NPR-A (and elsewhere in Alaska) are regulated by the State of Alaska (18 AAC) and the U.S. Environmental Protection Agency, and thus are outside the scope of this planning effort. The Alaska Department of Environmental Conservation[5] regulates the prioritization and responses to the remote and complex federal facility sites within the NPR-A. Some of the sites have required intense investigations over many years to understand the contamination and processes. The laws recognize that remedial actions can have many approaches. Thus, BLM continues to work closely with responsible parties to achieve remedial goals that best fit each site specific environment. Where viable responsible parties exist, the Department of Interior must not expend taxpayers' monies; and must allow those parties to complete the cleanup. Land ownership at the Umiat Landfill has not been completely defined, although it appears to be located completely on State of Alaska lands. Even so, the Bureau has been an active partner with the State and the Corps of Engineers, facilitating investigations, response actions, and remedial planning.

[5] http://dec.alaska.gov/spar/csp/federal.htm

COMMUNICATION NUMBER 86
Benjamin Moher

Alaska already has the overwhelming majority of protected lands in the US.

In order to be consistent with the statehood act and the ANILCA, and to affirm the Alaska constitution, Alternative D is, in my opinion, the best option presented.

I would ask that the IAP/EIS moving forward include clear and specific provisions for onshore infrastructure, particularly regarding the transportation of oil across the management area.

In addition to the petroleum resources of the NPRA, I would ask that BLM include mineral entry into the management plan.

The responsible development of Alaska's natural resources is not just an economic option--it is a heavy responsibility and a mandate.

[86.001] I also feel the activity plan should include clear, thoughtful, and proactive plans for reclaiming the 100 odd abandoned wells BLM left. I suppose showing industry how not to do it.

Benjamin Moher
Anchorage AK

[Response to 86.001]
Legacy wells and BLM's efforts to address them are considered in the plan. See sections 2.2 and 3.2.11.2 - 3.2.11.3.

COMMUNICATION NUMBER 87
Janet Parkins

Not only that oil & gas exploration be prohibited, but that all special areas be recommended to Congress as wilderness areas, wildlife refuges, wild & scenic rivers and other preserves, so that future administrations can't just change the management at their discretion.

BLM should then manage these areas to protect these values, undisturbed, until Congress has acted upon these recommendations.

The Teshekpuk Lakes Special Area:

[87.001] All of the Teshekpuk Lakes Special area, as delineated in Alternative B, including the Teshekpuk Lake Caribou Study area on the east side of Dease Inlet and the Brant Survey area on the west side of Dease Inlet should be excluded from oil & gas exploration and should be recommended to Congress as wilderness and as a National Wildlife Refuge.

Drilling and corridors, pipelines and roads, temporary and permanent facilities should not be allowed anywhere within the boundaries of this special area as depicted in B.

[87.002] Peard Bay Special Area:

Even in Alternative B only the bay itself, its barrier islands and the land within one mile of its shore is restricted from oil & gas drilling. The vast majority of the rest of this Special Area is open to oil & gas drilling with some restriction.

The entire area as depicted in the boundaries of Alternative B should be excluded from oil & gas exploration and should be recommended to Congress as a National Wildlife Refuge with lands to be studied for their wilderness potential.

[87.003] Kasealuk Lagoon Special Area:

Likewise, even in Alternative B, only the bay itself, its barrier islands and lands within a mile from its shore are restricted from oil & gas drilling. The rest of this special area is open to oil & gas drilling.

The entire area depicted in the boundaries of Alternative B should be excluded from oil & gas exploration and should be recommended to Congress as a National Wildlife Refuge with lands to be studied for their wilderness potential.

Utukok River Uplands & Colville River SA:

The Utukok River Uplands Special Area is the core of the Western Arctic Caribou herd's calving grounds. The rivers draining north out of the Brooks in the southern half of this area are the corridors the caribou follow on their northward migration to the calving grounds. In Alternative B BLM has rightfully prohibited oil & gas drilling within this entire area and the upper portion of the Colville River Special Area. But this protection is not permanent enough. Future administrations could change it.

[87.004] The lower portion of the Colville River, below the mouth of the Etivluk River should also be designated Wild & Scenic and cooperative agreements should be made with the State of Alaska and Alaska Native Corporations to help protect the river's south bank.

Thank you for your consideration to these issues

Janet Parkins
snikrap@telus.net

[Response to 87.001]
The BLM disagrees. Designating any part of the NPR-A as a Wildlife Refuge, and transferring jurisdiction to the U.S. Fish & Wildlife Service, would require Congressional action and is beyond the scope of this planning effort. For further discussion, see Section 2.4.6 - Alternatives Considered But Eliminated From Detailed Analysis.

[Response to 87.002]
Large expansions of existing Special Areas and establishment of new Special Areas were considered. All or nearly all that is proposed in the comment has been incorporated into Alternative B-1.

[Response to 87.003]
The BLM has determined that it would not recommend legislation to transfer administrative jurisdiction over all or part of the NPR-A to the USFWS as part of this plan. For a discussion of that determination, see section 2.4.6.

[Response to 87.004]
The State of Alaska remains opposed to designation of new components of the national wild and scenic rivers system in Alaska.

COMMUNICATION NUMBER 88
Stanley Senner

PMB 144
4110 SE Hawthorne Blvd
Portland, OR 97214

21 May 2012

NPR-A IAPIEIS Comments
ABC OM Project Office
1835 South Bragaw Street, Suite 490
Anchorage, AK 99508

Dear Sir/Madame:

Thank you for the opportunity to comment on the Draft Integrated Activity Plan! Environmental Impact Statement for the National Petroleum Reserve-Alaska. I have visited the Reserve on the ground several times and flown over it many times. I am very familiar with its geography and resource values, including wildlands and internationally significant populations of migratory birds and other wildlife.

Congress has long recognized that there are special areas in the Reserve that deserve recognition and protection of their surface values. Hence, I strongly endorse Alternative B as providing the most protection for the wildlife, ecology and critical subsistence uses of this region. Among those special places are the Teshekpuk Lake, Dease Inlet area, Peard Bay, Utukok River uplands/DeLong Mountains, the Colville River, and Kasegaluk Lagoon.

[88.001] The special areas recommended in Alternative B are a good start, though I believe the existing Kasegaluk Lagoon Special Area should be expanded to more fully take in the watershed of the streams draining into the lagoon. In addition, in my experience, the Special Area designation has had little substantive meaning for BLM. I encourage that any and all designated Special Areas be accompanied by strong protective stipulations governing any surface activities, including possible roads, bridges, gravel removal, and pipelines. In this regard, I am especially concerned about the Colville River corridor, with its world class populations of nesting raptors, and the Dease Inlet and Peard Bay areas with high densities of nesting waterfowl, loons, eiders, shorebirds, and other migratory birds.

At the very least, the Teshekpuk Lake, Utukok River uplands/Delong Mountains, and Kasegaluk Lagoon areas should be permanently closed to oil and gas leasing, exploration and development, as well as to any form of mineral entry. The surface values and resources in these areas, such as molting geese (north of Teshekpuk Lake), calving caribou (Teshekpuk Lake and Utukok uplands), wildlands (Utukok uplands/DeLong Mountains), and nesting, resting, stopover and feeding habitats for migratory birds and marine mammals (Kasegaluk Lagoon) deserve the highest degree of protection that BLM can provide.

Thank you again for preparing this first ever IAP for the entire Reserve, which is a credit to your leadership and administration.

Sincerely,
Stanley Senner

[Response to 88.001]
The IAP/EIS's Alternative B-1 would expand the Special Area to include much of the drainage of the Kasegaluk Lagoon. The BLM has considered a range of protection measures for Special Areas in the range of alternatives depending upon the resource values identified.

COMMUNICATION NUMBER 89
Susan Steinacher

I feel that your planning process needs to be put on hold until you have gotten MEANINGFUL and INFORMED feedback from the people who live within the NPR-A and/or are impacted by development within the NPR-A.

I firmly believe that it is the responsibility of BLM to develop and invest time, money and people into an EFFECTIVE and MEANINGFUL exchange of information with the communities affective by their planning process. If you have held a meeting and no one comes then the agency has failed and must try other approaches.

For decades BLM has followed the same ineffective outreach strategy and then blamed the local people for not participating in meetings. Agency reps do minimal advertising, fly-in for the day, put up their maps and charts, present their PowerPoints, and leave. This is not working, and no decisions should be reached until the BLM has devised an EFFECTIVE, CULTURALLY RESPECTFUL outreach process.

It CAN be done, but not in a one-day jargon and acronym-filled meeting. Agency reps need to spend at least several days in each village, hanging out at the IRA and City Office, visiting people in their homes, and looking for opportunities to sit down one on one with people in their homes, and discuss the issues over a cup of coffee. Agency reps need to do as much listening as talking, and not feel communication style of the community members.

[89.001] Materials need to be developed that are free of jargon, and are written at no more than an 8th grade level, especially for those for whom English is not their first language. The issues need to be delivered succinctly, and in a manner that highlights the relevancy of the issues to a rural/village audience. These materials then need to be delivered to every individual's PO Box, with more delivered to local governments and organizations.

Regular radio interviews with call-in opportunities also need to be held regularly, with translation where and when necessary. Law suits have been filed and won in rural Alaska over the need for translation of complex issues.

BLM also needs to have a local liaison from each village identified, who will help agency reps negotiate the social infrastructure of their village, and whom local people can go to with questions for BLM. NEVER should BLM consider that posting something on their website constitutes meaningful outreach in rural Alaska.

This is not the way BLM or other federal agencies have conducted business in rural Alaska, but until they invest the time, money and staffing, they have not met the INTENT of the requirement to get local feedback. If a meeting is held and not enough people show up, then BLM has not met the legal requirement for local input. The onus should be on the agency to find meaning ways to engage, inform, listen and respond to local questions and concerns. And until they do, no plan - including this one - should advance to the next phase.

And requiring feedback to be substantive is an easy way to dismiss the many comments that are more general in nature, by people not equipped to read the entire document and quote from specific subsections. This effectively eliminates rural public comment, and allows only for comment from organizations and agencies with large enough staffs to review, digest and respond to the plan.

I think the planning process should be halted and backed-up until you have developed communication processes that yield substantial, substantive and meaningful input regarding the plan from the the Native residents of NPR-A.

Thank you. Quyana. Taiku.

[Response to 89.001]
The BLM appreciates suggestions for better outreach to the public, especially the residents of the areas in which it conducts planning. The BLM considers that its outreach as part of this planning effort has been adequate and in accordance with all relevant laws and regulations. The BLM has conducted tribal consultation and communicated with residents about the plan through multiple meetings of the subsistence advisory panel. The BLM delivers newsletters which are written at an 8th grade reading level to community members and local governments. Planning efforts and public meetings are advertised in local newspapers, and interpreters are present at meetings in which they are requested or necessary.

COMMUNICATION NUMBER 90
Jim Steitz

I write to urge you to enact the strongest protections for northern Alaska lands within the ill-named "National Petroleum Reserve" from oil and gas exploitation. Despite is official label, the north slope of Alaska is one of the last great intact ecosystems under American jurisdiction, and this should be the determinative fact in guiding BLM policy. Secretary Salazar correctly stated that, "Trade groups for the oil and gas industry need to understand that they do not own the nation's public lands. Taxpayers do." The BLM's plan for the NPR-Alaska should reflect this truth, and give priority to protecting the outstanding biological values of these lands, including some of the densest summer bird populations on the planet. BLM also has a special obligation to the threatened and endangered species for whom the north slope of Alaska is home, including polar bears, Spectacled Eiders, Steller's Eiders, and bowhead whales. Any oil leasing should be confined only to lands with absolutely minimal potential for ecological harm, nowhere near wetlands, rivers, or known migration routes. **[90.001]** Specific lands that must be absolutely off-limits to exploitation include Teshekpuk Lake, Kasegaluk Lagoon, Colville River, the Utukok River Uplands, Dease Inlet, Peard Bay, Ikpikpuk River, and the DeLong Mountains and Foothills. BLM should designate these as Wilderness Study Areas and recommend such a Congressional designation. BLM's original charter, the Federal Lands Policy and Management Act of 1976, calls for BLM to meaningfully weigh and evaluate the competing resources values of public lands. The Obama Administration's goal of reducing carbon dioxide emissions must also be counted against the net value of the hydrocarbon when deciding whether their extraction is worthwhile. The decision to extract oil and gas does not occur in a policy vacuum, triggered by industry interest, but in the context of an urgent national need to shift from carbon-based fuels. When intact public lands are becoming scarcer and excess carbon dioxide is becoming a liability, the balance of values should be shifting in favor of preservation of the former and discouraging the latter. The BLM should consider that the 3 million acres already leased include ample opportunities for oil and gas development, perhaps too much already considering the nation's interest in limiting fossil fuel use. The north slope of Alaska in 2010 is an appropriate place and time to call a time-out in the counterproductive federal leasing of fossil fuel deposits. Please protect the "National Petroleum Reserve" as the biological reserve that it truly is, and in which condition it can most contribute to the public good of an intact planet.

[Response to 90.001]
Section 2.4.1 of the IAP/EIS, "Alternatives Considered but Eliminated from Detailed Analysis," addresses this issue. The BLM determined that recommending lands for Wilderness designation is beyond the scope of this planning effort, although BLM did analyze alternatives that would protect a broad range and areas of land with such wilderness characteristics. Independent of this planning effort, BLM may identify and/or make recommendations regarding designation of Wilderness within the planning area.

COMMUNICATION NUMBER 91
Ron Yarnell

As a business owner, wilderness guide and one who has spent a substantial amount of time in the NPRA I want to lend my support to Alternative B of the Integrated Activity Plan EIS for the NRPA. First of all let me thank you for doing this comprehensive plan. Under past administrations, doing plans for parts of the area were totally inadequate in anticipating problems associated with the whole of the NPRA. This approach of including the entire NRPA does a better job of resource analysis and integral planning than all past efforts combined.

I also want to thank you for including considerations for wilderness suitability and for inventorying the suitability of wild and scenic rivers within the NPRA. This willingness to go above and beyond the minimum that needs to be done is a refreshing change in approach compared to previous administrations.

First and foremost I want to emphasize Alternative B is pretty much the minimum necessary protection required to fulfill the obligations of the Naval Petroleum Reserves Act of 1976, as amended. All other alternatives, including Alternative A, the no action alternative, do not even come close to insuring protection of the resources, as required in the law.

I want to emphasis, once development has started, areas are leased, roads are being built, it will be impossible to reverse many of the impacts associated with this development. For this reason I urge the Secretary of Interior, to proceed with caution, and to error on the side of not opening areas were sufficient information about impacts on the resource are not adequate.

To a certain extent, this has already been used in the two areas where leasing has been deferred for a set number of years. No leasing should be allowed in any area, until we know enough about those areas that we can make adequate decisions about the impacts exploration will have upon the resources.

I also feel very strongly that "all" lands within the special areas designated in Alternative B should be permanently closed to all forms of development. Not only should oil and gas leasing be deferred from these areas, but stronger forms of protection should be given these areas, so future administrations can't just change the rules, and open them back up. **[91.001]** The BLM, through Secretary of Interior, in the final EIS for this Reserve should make recommendations to Congress to permanently protect these special areas as wilderness areas, wildlife refuges, wild and scenic areas and other special designations that only Congress can change. The plan should also emphasize that BLM will manage these special areas in a manner that will insure the values for which these areas are recognized will not be degraded until Congress has a chance to act on these recommendations. The biological values, especially to marine mammals and waterfowl, of the coastal areas and the lakes and rivers inland on the coastal plain are of an extremely high nature. Oil and gas development within the special areas in these regions cannot be done without significant impacts upon these resources, therefore no leasing should be allow within the boundaries of any of the special areas as designated under Alternative B.

The Teshekpuk Lake Special Area should include all of the Teshekpuk Lake Caribou Herd calving grounds and insect relief areas as designated in Alternative B, south to and including Fish Creek and west to include both shores of Dease Inlet. Inland, the Utukok River Upland Special area, as delineated in Alternative B, should be fully recommended for wilderness status. This is the only way to fully protect the calving grounds of the Western Arctic Caribou Herd and to insure that the caribou have adequate insect relief areas and migration routes free of roads, pipelines and other infrastructure that could disrupt caribou access to these critical areas.

The wilderness values of the Arctic Foothills Province, especially the upper Colville River and its southern drainages, the Utukok River and the Kokolik River are extremely high. No place else in the Brooks Range offers the wilderness experiences found on these rivers. Rivers such as the Nuka, Kiligwa, Kuna, Ipnavik, Etivluk & Nigu are some of the most inaccessible rivers on

the continent. These along with the Utukok and Kokolik Rivers should be fully protected not only as wild and scenic rivers, but should be encompassed in a wilderness area that is contiguous with the Noatak National Preserve and include all of the Utukok River Uplands Special Area and the upper Colville River Special area, above the Awuna River as designated in Alternative B. No road, pipeline, transportation corridor or utility corridor should ever cross this area.

No mining or mineral exploration should ever be allowed. BLM should recommend all the Utukok River Uplands Special Area, as delineated in Alternative B, as a wilderness area to Congress and should manage these areas in a manner to insure not to degrade their wilderness values until Congress has acted on these recommendations. All mineral leasing should continue to be banned from within the entire NPRA. Sufficient coal and hard rock minerals are available outside the NRPA, much of it on private lands, much more accessible than the remote resources within the NRPA.

The remainder of the Colville River Special Area, below the junction with Colville and Etivluk Rivers should be recommended as scenic and recreation under the Wild and Scenic River system. Cooperative agreements should be reached with the state and native governments to insure that both the north bank and the south bank of this largest river on Alaska's north slope remain as wild as possible, with the minimum number of road and pipeline crossings and the maximum protection possible for the wildlife, wilderness, recreational and subsistence values.

Thank you for this opportunity to respond.

[Response to 91.001]
The IAP/EIS considers a wide range of management protections, including for the Special Areas and including many of the suggestions presented in the comment. It does not revisit in detail Wild and Scenic River recommendations addressed in previous plans. For an explanation, see section 2.4 on "Alternatives Considered But Eliminated From Detailed Analysis."

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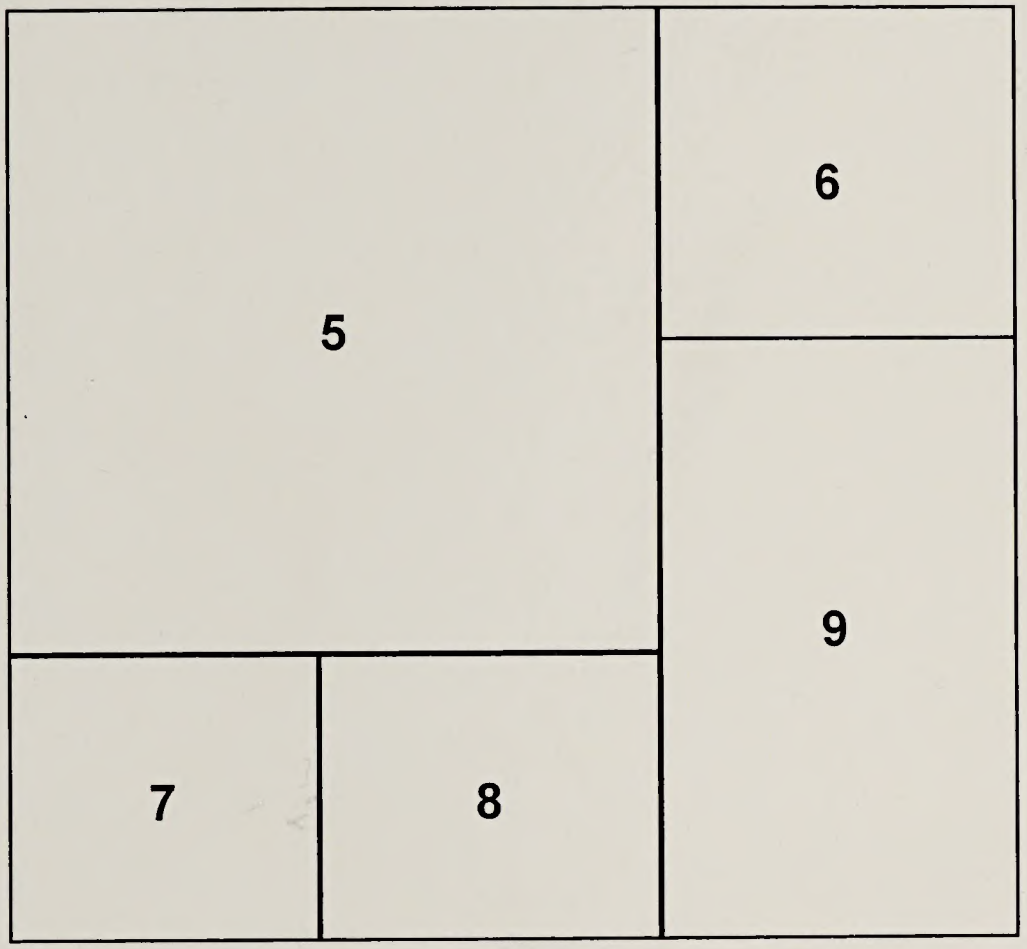

Back Cover Photos:

5. Coastal erosion due to warming permafrost shoreline, National Petroleum Reserve-Alaska.
   Photo by University of Texas.

6. Arctic Fox, National Petroleum Reserve-Alaska.

7. Transporting exploration drill rig equipment, National Petroleum Reserve-Alaska.
   Photo by NSSI.

8. Bear flowers on a thermokarst slump along the Colville River, National Petroleum Reserve-Alaska.
   © Richard Kahn

9. Subsistence ice fishing, Nuiqsut, Alaska. Photo by NSSI.